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To assess the viability of a new service concept and to develop a comprehensive business plan for an energy management consultancy (EMREG)

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Executive Summary

The purpose of this study was to establish the feasibility and viability of a proposed new, high profile, specialist B2B service called Part Time Energy Management. Based on this, a business plan was to be developed in order to identify the most appropriate strategies for EMREG to pursue in delivering this service.

The research included both primary and secondary research. A review on current literature with a focus on New Service Development (NSD) was carried out. The primary research included in-depth interviews with 11 participants from SMEs and energy professionals across different organisations.

The research findings indicate that there is indeed a market for the PTEM concept proposed by EMREG. This need is however met by the major challenges specifically of time and financial constraints that SMEs face to implement energy management systems in general.

The analysis indicates that EMREG needs to differentiate its service based on Boutique 2 strategic group and focus on niche markets. Further research indicates that EMREGs primary, secondary and tertiary target customers fall within the group of SMEs with employee number of between 50-199, 20-49 and 200-250 respectively. Additionally, the South East and North West regions are identified as primary regions for manufacturing, transportation and storage industries. The competitor analysis also reveals that there is no competitor solely focused in part time energy management concept.

The financial analysis indicates that the PTEM service will save an average of 10% of total energy spending of the client from the primary segment. This works to a forecasted first and second year projections turnover of £78,705 and £808,913. Profit margins are calculated as -8.15% and 27.94% in consecutive years. It is estimated that EMREG will achieve a break even sales volume off £400,000 within 18 months' of commencement.

On marketing, it is identified that focus should be placed on promotions, sales tactics, pricing and people. The critical risks identified with this service are: competition from utilities

companies, availability of human capital, technology, control and accountability, reputational risk.

In conclusion, the PTEM concept is a viable on considering the inefficiencies within the SME sector. EMREG can achieve great success in this industry with a clear and unique value proposition in addressing this need. Despite this, there is some significant threat as far as imitability of this concept is concerned, together with other risks associated with finances. EMREG should therefore pursue this strategy but with caution.

1. INTRODUCTION

The introduction chapter of this report helps in giving an overview of the current market situation related to the research topic, elaborate on purpose and significance of study carried out. It also highlights the specific objectives this project aims to achieve, and emphasizes on various limitations in the study.

1.1 Project background

The project undertaken here is related to the energy management sector. Energy management is defined as "techniques, processes and activity which drive more efficient energy use. Energy management allows for a reduction in energy costs and carbon emissions, hence ensuring efficient use of energy consumption" (BSI, 2009, p.1)

In UK, several energy related public and private organisations such as Department For Energy And Climate Change (DECC), British Standards Institute (BSI), E-ON highlight that increasing business activities in a global environment has put up two broad challenges to be addressed. One is a moral imperative i.e. the increased carbon emissions which has resulted in climate change and the other is business imperative i.e. depletion of energy resources and increasing energy prices.

A report by BSI (2009) on findings of energy management highlighted that the issue of climate change is becoming complex in current volatile business environment. This has caused a shift in current business model of the public and private sectors. Organisations are faced with a challenge of increasing energy prices and pressure to shift towards a low carbon economy. Additionally, the economic crisis has caused organisations to control more strictly their costs and adopt optimum processes to carry out business activities.

At macro level, energy use within industries, businesses, public sector organisations and institutions are covered by energy efficiency policies to reduce carbon emissions. Examples of these are EU Emissions Trading System (EU ETS), the Carbon Reduction Commitment Energy Efficiency Scheme (CRC) and Climate Change Agreements (CCAs). Also at micro level, the Climate Change Act 2008 was introduced as the first framework to tackle climate change issues in UK. The Act aims to reduce the carbon emissions within UK by putting up a target of

34% reduction in greenhouse emission by 2020 and 80 % by 2050 (DECC 2010). The cost-effective delivery of these targets will require contributions from all sectors of the economy. The report by DECC (2010) also highlights that apart from large organization falling under these policies, there are number of smaller and less energy intensive organizations, which do not fall under these binding policies. However, in combination they make a big impact on UK's total carbon emission.

It is estimated that 20 per cent of total UK carbon emissions are emanated from SMEs which represents 20mtCO2 (Carbon Trust, 2007). In addition, SMEs account for 45 per cent of UK business energy use (BERR, 2009). According to recent research by E.ON (Greenwise, 2011), energy inefficiency could be costing small businesses as much as £7.7 billion a year. Considering that the total energy consumption in UK (2010) is reported as £124bn (DECC, 2011), reducing energy consumption in companies of all sizes is vital in order to meet the targets.

Overall, studying SMEs in UK has puts a very strong and interesting case from the perspectives of both moral and business imperatives discussed above. It links to our business case as we will try to understand the energy management requirements of SME's in UK. This will enable us to perform our task which is; to assess the feasibility of proposed Part Time Energy Managers (PTEM) service and to develop a comprehensive business model around this service, particularly targeting SMEs for our client East Midlands Renewable Energy Group (EMREG).

The following section will define the statement of our business case in context to the background discussed above and serve as a guide for formulating the specific objectives of project.

1.2 Statement of Business Case

In this section, firstly an overall objective for the project is stated and then the objective is divided in two specific objectives. It is followed by a list of questions which will be answered later in the report to understand what this report specifically tries to achieve.

Overall Objective: *To assess the viability of PTEM concept and to develop a comprehensive business plan for EMREG who wants to exploit the opportunities of PTEM concept for SMEs in UK*

Specific Objective1: To assess whether or not there is a need for PTEM service in the energy management market.

Specific Objective2: To develop a business plan including business strategy, target markets, marketing strategy, features of the service and financial projections if the need is identified

To achieve the objectives defined above; this report identifies relevant information and subsequently performs analysis. Specific questions which the report will try to address are mentioned below in Table 1. This list helps in defining the approach of research carried out and provide a clearer route to achieving the specific and overall objectives.

Specific Objective 1	Specific objective 2
How do SME's view receiving a one-off consultancy services versus having access to on-going support on energy management?	Who are the competitors of EMREG and what are their strengths and weaknesses?
What are the short and medium term challenges faced by SME's to implement EnMS?	Who are the most likely targets for this service?
To what extents are SME's looking at energy costs and efficiencies compared to other potential cost saving opportunities?	What features or benefits are most likely to resonate with the target audience?
What is the current behaviour of SMEs in terms of looking to reduce costs?	How EMREG should position itself in competitive environment?
What are the industry and market indicators which PTEM will compete?	What is the perceived cost and expected pricing model for energy management services and the proposed PTEM service?
What are the drivers to implement EnMS?How do they affect SMEs?	What are the resources needed to achieve a reasonable return on investment?
Which channels do they use to get support on energy performance?	What should be the tactics to enter the market?

Table 1 – Research questions to address objectives

The next section addresses the general objective of the study and highlights what significant contribution the results will make and who will benefit from it.

1.3 Significance of the study

As stated in the introduction section 1.1, energy inefficiencies in SMEs cause a huge burden on the economy and the environment. A tailored service that meets the needs of SMEs in terms of improving energy performance will benefit the companies, environment and the UK as a whole.

The results of the study will enable EMREG to understand the PTEMs economic value and give multi-dimensional strategies to exploit this opportunity. The study also provides EMREG practical and tactical recommendations which are designed for short and long term execution.

A unique research and analysis is carried out by combining academic literature, primary and secondary data. Hence, this study may also be beneficial to other stakeholders who may have an interest in understanding SMEs' needs in relation to energy management.

1.4 Scope of project

The study is primarily going to focus on SME's market within UK. It is a design phase study of a new service which is described and discussed in the analysis (chapter 4) and business plan (chapter 5) sections of the report. This study will act as a working document for EMREG to develop its new service and test in the market to form a final opinion whether or not it has an economic value.

A general understanding on SME's energy management requirements within UK are identified with the help of common theme occurring in primary and secondary research. However considering the variation in customer requirements and circumstances surrounding it, there may be further research required by EMREG to address later issues.

The report has tried to cover all the important aspects of making a business plan which includes business, marketing and pricing strategy, value proposition, economics and risk management.

There is acknowledgement of the limitations to this study and the implications it can have for the outcome of this report. These limitations are further discussed in the section 3.7.

1.5 Structure

The introduction of the report, gives a starting point for the report to take up different processes described. The later section will be accompanied by literature review of chosen topic for the business case. The methodology adopted to carry out the research follows. Then, the report analyses the industry in terms of trends, size, drivers, competition and barriers. This analysis is generated by the information identified from our primary and secondary research. Further sections will develop a business plan and help in identifying the appropriate strategies to be followed by EMREG by utilizing the analysis. It should be noted that in text citation is done for the first part of report, and for business plan it has followed a footnote citation to provide an easy and smooth reading flow for the EMREG.

1.6 Definition of Terms

B2B	Business To Business
BEER	Department For Business, Enterprise & Regulatory Reform
BIS	Department For Business, Innovation And Skills
BSI	British Standard Institute
CCA	Climate Change Agreements
CCC	Climate Control Committee
CERT	Carbon Emissions Reduction Target
CRC EES	The Carbon Reduction Commitment Energy Efficiency Scheme
CSR	Corporate Social Responsibility
DECC	Department For Energy And Climate Change
EC	Environmental Consultancy
EU	European Union
EEF	The Manufacturer's Organisation
EnMS	Energy Management Systems
EM	Energy Managers
EMREG	East Midlands Renewables Energy Group
EU ETS	European Emissions Trading System
IRR	Internal Rate Of Return
ISO	International Standards Organisation
KPI	Key Performance Indicators
NGO	Non-Governmental Organisation
NHS	National Health Scheme
NPV	Net Present Value
NSD	New Service Development
PTEM	Part Time Energy Manager
REM	Regional Energy Manager
ROI	Return On Investment
RSM	Regional Sales Manager
SM	Sales Manager
SME	Small And Medium Size Enterprise
TM	Technical Manager
UoN	University Of Nottingham
VC	Venture Capitalist
YOY	Year on Year

2 LITERATURE REVIEW

The literature review aims to look at the previous research done for New Service Development (NSD) and to analyse aspect of NSD processes and types. The findings from this review will be applied to aspects of the business plan. To add value to the whole PTEM concept, critical success factors are reviewed to help in making the recommendations for a successful launch of the business plan. The use of business advisory and the various features associated with it is also explored in detail as part of the success factors for NSD.

2.1 Introduction

The concept of PTEM is one that involves the posting of energy managers to a facility (mainly SMEs) on part time basis. The main features of this service will be to provide detailed research, surveys and executions to ascertain the cost savings that can be achieved through instituting efficient energy management systems. A detailed service feature list is provided in the Appendix A.

The role of a PTEM will be to identify the potential areas for savings and improvement of the overall energy performance by following different steps of energy management systems. The service will primarily require the use of energy managers (EM) who will be recruited by EMREG. EM's are required to evaluate current energy performance and subsequently, devise strategies that will lead to cost savings on their energy usage.

NSD will form the underlying theme of this report while supported by research in the development of the business plan. The findings from the literature review of NSD will facilitate in gaining an understanding into how the NSD process influences performance. In doing this, the sources of literature reviewed will mainly include secondary data sourced from academic journals and articles, textbooks and the university's online database.

2.2 Why NSD?

This section of the review seeks to form a justification for the new service concept in relation to the market place. In this respect, NSD is discussed in relation to the complexities and challenges of the market place whilst highlighting the importance of NSD. Definitions of NSD are also indicated here to form the basis on which EMREGs service concept is classified as a new service.

In reference to the background of the business environment discussed in the introduction to the report, companies are faced with the challenge of adapting to the complexities within the business environment. Subsequently, the provision of solutions tailored towards the needs of the customers that they serve becomes a prerequisite for survival amidst competition in the market. (Froehle and Roth 2007). Schilling and Hill (1998) argue that differentiation of product offering becomes a tough force to reckon with as markets become more competitive, especially when differentiating on cost and quality.

Pilat (2000) cited in Menor et. al. (2000) highlights the dominance of service industries in most developed economies, referring to the significance of the over fifty per cent of such countries' gross domestic product being generated by the service sector. The service sector accounts for about 72% of GDP (UK Economy watch, 2010).

In line with the challenge cited in the preceding text, it is obvious that NSD has become a critical factor not only in industries, but has also become a topic of high interest for both academics and practitioners (Posselt & Forstl, n.d.). Successful development and introduction of new services therefore continues to be one of critical importance for the survival of many organisations today.

2.3 What is NSD?

To discuss NSD, we begin by defining 'service', and then what is understood by 'new service'. According to Packendorff (1994) cited in Edvardsson & Gustavsson(2003), "a service is an activity or a process where production and consumption coincide and it cannot be demonstrated, stored, or moved". Moving on, various definitions are given for new service depending on service offering (what service is offered?) and service concept (Menor, 2000).

Menor (2000, pp. 138) identified this need and defined a new service as; ‘an offering not previously available to a firm’s customers resulting from the addition of a service offering or changes in the service concept that allow for the device offering to be made available’. Other definitions of new service are based on the outcome and operational processes (Menor, 2000), which will be discussed under the types of NSD later in this report

New service development has grown dramatically over that last decades and continues to be a driving force of competitive advantage for many industries (Schilling & Hill 1998). This notwithstanding, service firms are faced with challenges with respect to their innovativeness which has led to a resultant high level of failure of nearly 50 per cent (Griffin, 1997; Cooper and Edgett, 1996, cited in Schilling M & Hill, 1998). The following sections will seek to gain an understanding into some of these challenges through a review of the various aspects entailed in the creation of a new service.

This section talks about the NSD in general and moves to identify the need for such services. The information gathered here will form the basis on which the following sections are built in looking at the types of NSD.

The next section of the literature review aims to classify NSD based on types available, and subsequently, seek to categorize EMREG into the most applicable category.

2.4 Types OF NSD

In this section, types of NSD are reviewed in an attempt to strategically categorise EMREG’s service concept, and devise strategies accordingly. The types of NSD will include two main types, that is adopted from (Lovelock, 1984 cited in Fitzsimmons and Fitzsimmons, 1999).

Various types of new service classification identified range from being true innovations, which are more radical in nature and totally new-to-the-world, on to more subtle ones that usually entail modifications of existing services. (Ottenbacher and Harrington, 2010). The service classification suggested by (Lovelock, 1984 cited in Fitzsimmons and Fitzsimmons,

1999) Is identified to be most suitable for this service after a careful review of the literature, and will be employed for the purpose of this report.

Lovelock, (1984) cited in Fitzsimmons and Fitzsimmons, (1999) classifies new service groupings in terms of innovation. On this dimension, services are classified into two broad categories: New services based on radical innovation and new services based on incremental innovations.

Radically Innovative Services	Incremental Innovative Services
• **Major innovations**: entirely new services for new markets, usually driven by innovations and technology when executed well. • **Start-up businesses:** Consists of new services for a market that is already served by existing products that meet the same generic needs. • **New services for the currently served market:** In this type of service, the organisation attempts to offer existing customers of the organization a service not previously available from the company.	• **Service line extensions**: Here, the existing service line is modified by adding complementary features that enhance the service offering. • **Service improvements**: This type of service offers realisable changes in the features of a service being offered and may occur as a result to consumer trends or in reaction to competition. • **Service improvements with style changes**: This type of service appears to be the most common one with companies typically making slight modifications to their already existing services these modifications tend to have some significant impact on the emotional senses rather than physical.

Table 2– Types of NSD

Table 2– Types of NSD, the service offering by EMREG is in line with new services for a currently served market (under radically innovative services) since PTEMs already exists in the market, but is not seen as a core service offering by the companies already engaged in this type of service.

Furthermore, based on the feature of the services described above, PTEMs also falls in line with service improvements. There appears to be an overlap between the two main service types putting EMREG into context. This indicates the complexity of the business model and hence, the need for a detailed consideration in formulating the business plan.

In this section, the various types of NSD are outlined and classified under incremental and radically innovative services. By analysing these, we see how EMREG fits into both types of services.

The next section will review the characteristics of services. Moving on, we discuss the process underlying NSD.

2.5 NSD Process

The NSD process is explored in this section and the critical stages identified in relation to EMREG's business concept. The key stages identified with respect to the NSD process are design, analysis, and development and launch. Each stage is discussed in detail and the most relevant to EMREG is/are identified. Through this analysis, the vital stage as far as the materialisation of this project is concerned will be identified and dealt with accordingly in the strategy formulation.

Service development must of necessity differ from that of new products because the two have dıfferent features that must be addressed at various stages (De Brentani 1991). The characteristics identified with service are: intangibility, inseparability, heterogeneity, and perishability. (Reinoso et al, 2009). These characteristics pose a strong challenge for EMREG to successfully deliver PTEM service to the market. However, research has shown that the systematic process of development in any venture helps to alleviate the risk of failure when new products are launched. (Palmer, 2005).

Service characteristics

Taking all the features of a service into consideration, PTEM service has a unique position. It includes some aspects of intangibility, inseparability, heterogeneity and perishability but also has product characteristics. (See Table 3)

Service Characteristic	Explanation
Intangibility	Although services tend to have some tangible component to it, by their nature, customers often 'buy' the service without a proven assessment of the outcome and/or experience at the time of purchase (De Brentani, 1991). Putting EMREG into context, the preliminary research, which will be done in SMEs, will be purely that of consultancy and therefore will assume the intangibility element of services in general. However, as the service offering moves from consultancy to PTEM, the outcomes provided becomes more tangible than intangible, if companies decide to go forward with this. This indicates a complex business as therefore certain aspects in the provision of tangible services should be taken into consideration
Inseparability	This refers to the simultaneous production and consumption in the presence of the consumer/customer (De Brentani, 1991). Again, the service offering proposed by EMREG is inseparable at the initial stages but drifts towards a service that is separable as PTEMs comes into place.
Heterogeneity	This refers to the variance in the outcome and the customers experience at separate purchase times (De Brentani, 1991). This is very relevant to EMREG, as different companies will be approached, each facing different energy related issues. The EMs will also display some level of variance in delivering the service at different locations, and therefore, indicates the true service element as far as heterogeneity in service is concerned
Perishability	This refers to the inability to re-gain service costs (De Brentani, 1991): either in the form of money, resources or time because they cannot be produced in advance. EMREG may be impacted by the factor in terms of recouping the resources and time that will be committed to delivering a service

Table 3 – Service characteristics

NSD Process

The academic literature on NSD process proposed by Palmer (2005) and Johnson et al. (2000) are expanded and reviewed, and the findings from it incorporated later into the business plan. Palmer (2005) identified the NSD process as entailing: getting the ideas, shortening ideas, developing and testing concepts, business analysis, development, training, and launch. This is consistent with Johnson et al (2000) proposed stages, which appears to be a more detailed version of that by Palmer (2005).

Johnson et al. (2000) developed an NSD process based on four broad stages classified as; design, analysis, development and launch and 13 detail tasks to produce and launch a new service. The model given identifies the importance of enabling factors: teams, tools, and organizational culture. The cyclical nature of the proposed NSD process depicts an interactive development process at every stage (Johnson et al., 2000) and the different development stages are discussed further. See figure 1.

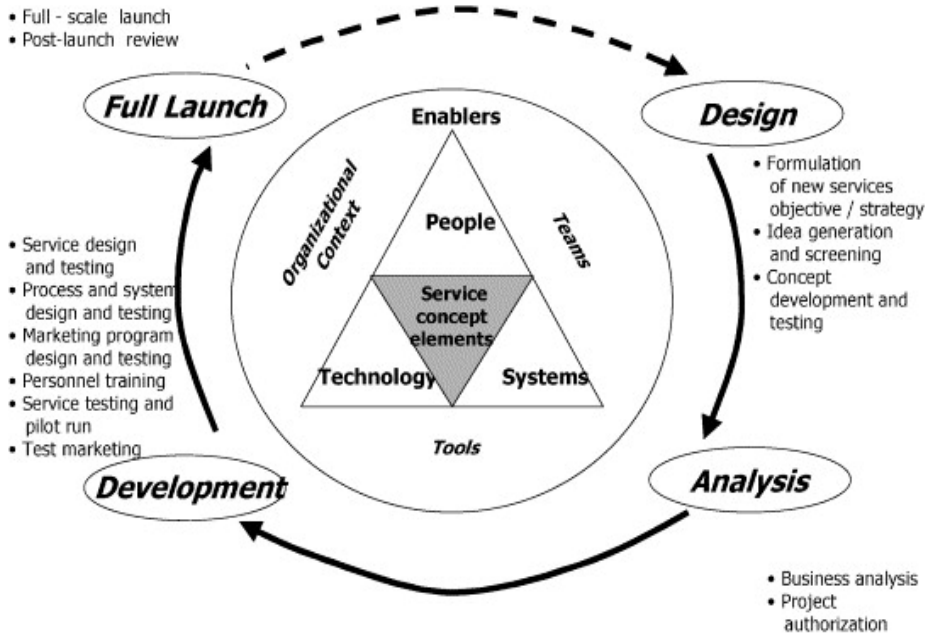

Figure 1 – NSD Process

Source*: Johnson, S.P., Menor, L.J., Roth, A.V., Chase, R.B. (2000)*

2.5.1 Design and Analysis Stage

The design and analysis phase is essentially the planning phase where issues such as market feasibility, capabilities and internal resources become vital to decision making (Reinoso et al., 2009). New service ideas and concepts are also defined at this stage. The new ideas are generated at this stage and can come from within or outside the organisation. (Johnson et al, 2000).

At the design stage, the biggest challenge here is ensuring that decisions are made on the basis of delivering the right services to customers (Reinoso et al., 2009). Customers can be an important source of idea generation and for this purpose, an analysis of customer relations towards service providers will be of great importance (Palmer, 2005).

To this end, more proactive research methods such as in-depth interviews as seen in this report together with effective processes that are customer oriented can be employed to boost customer satisfaction, and thus increasing the success rate (Ulwick, 2008, cited in Reinoso et al. 2009).

Enhancement of the organisation's image is crucial at this stage as customers are likely to attach a perceived quality with credibility, considering the intangible nature of services (Palmer, 2005). In addition, during this phase, there is the necessity to assess the market within which one operates as well as the competitors. Additionally, a thorough assessment of other external sources is required to give a better view of the opportunities available.

The analysis stage serves as a platform for firms to evaluate the market potential, performance and strategy of the service. This also seeks to give insight into whether the service concept is in line with the proposed strategy bearing in mind that of other existing services that are offered by the organisation (Reinoso et al. 2009). Factors such as the market size, financial projections/ goals and competitor analysis will need to be defined clearly and accurately to ensure that the projections are not far from attainable results (Craig and Aleda, 2007).

In analysing the service concept, most of the success factors remain speculative and can lead to grave inaccuracies. Taking this stage seriously therefore provides a firm the opportunity to evaluate the generated ideas and in relation to the viability of the concept as a new service for the organisation or otherwise. (Reinoso et al. 2009).

2.5.2 Development and Launch Stage

The development and launch phase represent the execution phase where design, use of enablers and cross-functional managerial efforts becomes critical managerial issues (Johnson et al, 2000). The development stage entails– pre-launch testing, prototyping tools, staff training, market confirmation, service fail-staffing, staff recruiting, technology development, process flowcharting, multilevel development and customer interaction (Edvardsson and Gustavsson, 2003; Johnson and Sanden, 2000, cited in Reinoso et al, 2009).

This stage is highly dependent of research, analysis and planning. Therefore, it is imperative to analyse adequately and gain a good understanding about the customer needs, such that this can be translated into actual services thereby developing the necessary resources and infrastructure to support the process. (Reinoso et al. 2009).

The many processes involved in this phase focuses on converting the initial idea into a viable one as well as being marketable enough to attract the target customers (Craig and Aleda, 2007). The service process is fine-tuned at this stage to ensure that the message is clear to the customer, as well as ensuring that the necessary logistics and resources are committed to the service delivery.

In developing the concept, the challenge for service organisations is to convey the concept in the absence of any diagrammatic or physical expressions, which are easier to interpret in the case of products. The service concept must carry a clear message or proposition as building a mental picture in the minds of customers becomes difficult (Palmer A, 2005).

The launch stage is the final stage, where plans and models of the new service offering are prepared for the market (Reinoso et al., 2009). The launch stage is essentially comprised of six processes:

formalized launch, formalized promotion, post-launch evaluation, expectation setting, customer training, and internal promotion. (Johnson et al, 2000).

In launching the NSD, timing is very critical and can have implications for a company. The longer the various developmental stages take, the greater the chances of competitors entering the market first. Firms may take a less risky approach in the presence of scepticism/ uncertainties about the new service, by staging a 'soft launch' i.e. making the service available to selected customers stressing on the possibility of certain aspects of the service process not being finalised (Palmer A, 2005). Advertising and promotions are identified as the most direct forms of communicating the message of the service at the launch phase. (Craig and Aleda, 2007)

Upon completion of the launch stage, a comprehensive post-launch analysis may be desired. This will serve as a measure to evaluate performance of the NSD process, together with marketing efforts and to generate adequate feedback for system improvements (Froehle et.al.2000) .The need to gather customer feedback at the post launch phase is necessary in order to identify any unforeseen lapses in the new service, and subsequently institute improvement methods where necessary. (Johnson et al, 2000).

The various stages in NSD are identified in this section as the design, development, and analysis and launch stages. By analysing these categories, we identified the most relevant stages that EMREG should focus on investing more in. The design and development phase are identified as the most crucial precedent factors, as this falls within the planning domain. The development and launch phase on the other hand will become relevant as the company progresses with this business model following recommendations made in this report.

The next section will identify some success factors for the development of a new service. These factors will be elaborated and the findings will be utilised accordingly. Failure factors will also be identified and discussed in relation to EMREG.

2.6 Success Factors

Various academic literatures highlight four important themes for success factors in NSD. This will seek to contribute to the business plan by identifying some critical issues to address, and in the process, mitigation the risk of failure associated with this service.

2.6.1 Market orientation

This refers to the extent to which the new service is in line with client needs, values and operating systems (De Brentani, 2001). It entails developing an understanding of consumer requirements whilst taking into account the effect of competitors (Ottenbacher and Harrington, 2010) Firms with a strong grip on this dimension can gain competitive edge through a clear identification of client needs, development of prompt response to changes in customer requirement and subsequently solve customer problems. (De Brentani, 2001). This offers firms an opportunity to adjust their service offering to individual client needs (De Brentani, 2001).

Market orientation is important in terms of planning and evaluating market trends, as this tends to impart first mover advantage for companies, and in the process, gain an advantage in market entry (Limpibunterng and Johri, 2009).

In achieving this, companies must develop proactive measures to respond to changes in the market, which can only be effective with a thorough understanding of customer needs.

A strong research into the target market as well as a thorough competitor analysis will serve as prerequisites to building a strong market orientation (Menor and Roth, 2009). A strong degree of market research is stated to impart positively performance. This is also thought to develop a good alignment with strategy within complex markets (Neu and Brown, 2005).

In essence, the strategies that are developed for services will have to be aligned to fit the customer needs as well as the demands of the external environment (Neu & Brown, 2005). The complex market consists of different businesses with varying needs, therefore customer centred orientation is essential in developing services that fit client needs (Neu & Brown, 2005).

2.6.2 Front line expertise

This refers to the extent to which firms use trained and skilled human resources for service production and delivery as well as for creating new service offerings. Frontline employees have been identified in research as vital resources to organisations (De Brentani, 2001). The more successful firms are thought to be the ones who emphasise the use of highly skilled personnel in all aspects of the service (De Brentani, 2001). With a service like PTEMs, the human capital becomes a determining factor for acceptance by the target group i.e. Small and Medium Scale enterprises (SMEs).

Ottenbacher and Harrington (2010) asserted that the expertise of frontline staff is imperative owing to the direct effect they have the perception of service quality by consumers. A careful evaluation of frontline employee performance is essential especially in relation to providing good, courteous service, ability to resolve customer complaints and a strong commitment to operation and to customers.

Empirical evidence by Posselt and Forstl (n.d.) also identified the need for quality front line expertise by indicating that it is important to a ensure a high level of expertise in service firms, in this case PTEMs. In this respect, the ability to understand the customer needs is vital to meeting the expectations of the service offering. Posselt and Forstl (n.d.) indicated that service personnel should demonstrate strong behavioural competencies in order to gain the trust of customers. EMREG will need to demonstrate their capability to deliver tangible results by leveraging the quality of the human resource available to them.

Evidence from a study conducted by Neu & Brown (2005) using a sample of 16 successful service firms of indicated that those organizations invested heavily in securing quality employees by three primary means; extensive initial, formal classroom training, extensive on-going, formal classroom training and service employees learning from each other through formal and informal collaborative training and development. High level of employee expertise also tends to impact positively on performance and as such should be pursued with much caution (Neu and Brown, 2005).

Additionally, frontline employees were expected to demonstrate the willingness and ability to take up varied responsibilities in the course of the service delivery (Neu and Brown, 2005).

2.6.3 Formal testing and launch

This step entails the extent to which the firm undertakes pre-launch service testing, training and promotional programmes (both internally and externally) during the new service launch (De Brentani, 2001). This is essential to effectively position the new offering In relation to competitors and to provide a clear message that customers can quickly identify with the firm and to have the ability to persuade customers in patronizing the service offering (De Brentani, 2001).

De Brentani (2001) asserted that the ideas that are generated in the development process need to be adequately tested before it is presented to the client and the market for that matter. Promotional activities should also be pursued with being directed at customers as well as the personnel involved in dispensing the service (De Brentani, 1991). Such formal measures are essential for evaluating and testing ideas and concepts to exclude failures on one hand and to facilitate the marketing strategy/plan on another hand (De Brentani, 1991).

The quality of the launch is important for the successful service as it provides a means of eliminating errors in the service dispensation, hence resulting in more effective, reliable and user friendly services (De Brentani, 2001). The launch phase is also essential for positioning the service being offered against that of competitors and to provide a clear message that the target customers can quickly identify with (De Brentani, 2001). The implementation of such formal approaches is particularly important for turbulent environments and radical innovations also (Storey and Hall, 2010).

2.6.4 Organisational factors:

2.6.4.1 Top management commitment and employee involvement and teams

The involvement of employees and customers at various stages of the development process is an important success factor especially at the design phase where idea generation is of essence (De Brentani, 2001) A high level of coordination among people and departments has been cited as one of the key factors need for the success of a new service. In this respect, employees are expected to understand their involvement in the day-to-day running of specific projects and subsequently, what benefits such activities bring to the company (Edgett, 1994). Motivation, participation, contribution and consent amongst employees bring a sense of involvement, which underlies empowerment. (Palmer, 2005).

(Edgette, 1994) additionally emphasises the importance of having a strong and visible senior management support throughout the NSD process (Edgett, 1994). A high level of top-management commitment is thought to result in a higher probability of the new service success, as this influence the amount and quality of resources that are committed to the service (Edgett, 1994).

Services that encourage a degree of autonomy in the dispensation of duties decisions may contribute to improved staff and customer relations (Neu and Brown, 2005). This becomes as issue of concern when the service delivered entails relationship management as opposed to transactions. Successful service firms become more effective by encouraging employees to use their judgements in solving problems, usually through the provision of personal contributions and initiatives. (Ottenbacher and Harrington, 2010). Sharing or accessing human resources has been identified to provide a network of personnel that could be leveraged as managers interact with and are informed about the complexities of the market (Neu and Brown, 2005).

The use of teams is articulated because it forms a vital element for the company under study since the business concept proposed here will require the need for effective communication between the company and the energy managers. With the situation where energy managers are not likely to be permanently stationed within the company, teamwork becomes a

prominent success factor. Cross-functional teams have proven beneficial in many instances with facilitation of communication within an organisation being one major benefit (Schilling and Hill, 1998). This becomes more advantageous to firms like EMREG when such teams are diversified, as it broadens the knowledge base and encourages people to become more innovative in their activities (Schilling and Hill, 1998). Applying this to the PTEMs, it will provide a well-coordinated flow of information between staff as well as the managers of the firm.

2.6.4.2 Use of Acceptable Business advisory Techniques

Customer acceptance is of prime essence to the development of new services and therefore becomes a critical success factor for new service creation. In this vein, business advisory will be looked at in detail to highlight his important success factor.

The reluctance in seeking the service of external advisors by SMEs (Dyer and Ross, 2007) has often been attributed to the propensity for SMEs to place great value on independence, since in their view, succumbing to any external advice may be depict failure (Dyer and Ross, 2007). However, the explanation that has gained most ground is that advisory services often offered to small firms are deficient or inappropriate (Gibb, 2000) usually because they generally offer less practical advice because of their lack of understanding of the processes in SMEs (Gibb, 2000).

A study conducted by Dalley and Hamilton (2000) suggested that advisory bodies i.e. consultancies are usually highly formalised, institutionalised and theoretical, whereas the SMEs are more informal, spontaneous and practical/experiential (Dalley and Hamilton, 2000). SMEs are more likely to buy into ideas or advisory services offered by accountants, mainly be because SMEs value outcomes that are tangible and can have an obvious effect on the financial bottom line (Blackburn et al. 2010). The approach used by advisories is of importance as this also serves as a success factor in understand the most suitable approach to be used in the administration of the PTEM service (Dryer, 2007). This is mostly facilitated by the conversational rather than formal advice that SMEs tend to have with their accountants.

The success factors discussed above are identified as the most critical to the development of new services and relevant to PTEM case. These are market orientation, the need for the right expertise, formal testing and launch and organisational factors.

2.7 Implication of Literature Review for the Business Plan

The findings of the literature review have tremendous implications for the business, which will be followed in the next chapters. Implications and derived sections are summarised below in

Table 4 – NSD literature implications for the business case.

Implication	Derived
A fit between the service and the customer needs in formulating the business plan	Market Orientation (Success Factor)
A clear value proposition in reaching its target customers	Design Stage
The need to place much emphasis on the designing and analysis of the service concept	NSD Process
Clear definition of EM in executing this service and the level of expertise required to be successful	Front-line Expertise (Success Factor)
Proper testing and timing	Development and Launch Stage
SMEs behaviour towards business advisory should be taken into account while building the value proposition and marketing.	Organisational Factors (Success Factor)
Enhancement of organisational image	Design Stage
Use of Diversified and cross functional teams for effectiveness and innovation	Organisational Factors (Success Factor)

Table 4 – NSD literature implications for the business case

3 RESEARCH METHODOLOGY

This chapter focuses on the describing and discussing the methodology used to address the business case given by EMREG. It classifies the research according to a model given by Collin and Hussey (2009) and later on, moves to discuss the sources of data and data collection methods. The section concludes with a set of limitations and implications to the business case.

3.1 Introduction & Study Approach

The report is considered problem specific dissertation in context to be working with the company EMREG. For this reason, it is necessary that the gap between academia and business need to be bridged in order to produce a report that can be meaningful to the company and have the appropriate academic backing to support the arguments or claims made.

An outline of the study is illustrated in

Figure 2, which gives an overview of the processes carried out in conducting the research. The approach of this study aims to gather all the relevant information on the current market requirements of energy management systems.

In doing this, primary and secondary sources of data were identified, compiled and analysed using in-depth interviews. This was done with industry experts and journals, company websites, university database and articles respectively.

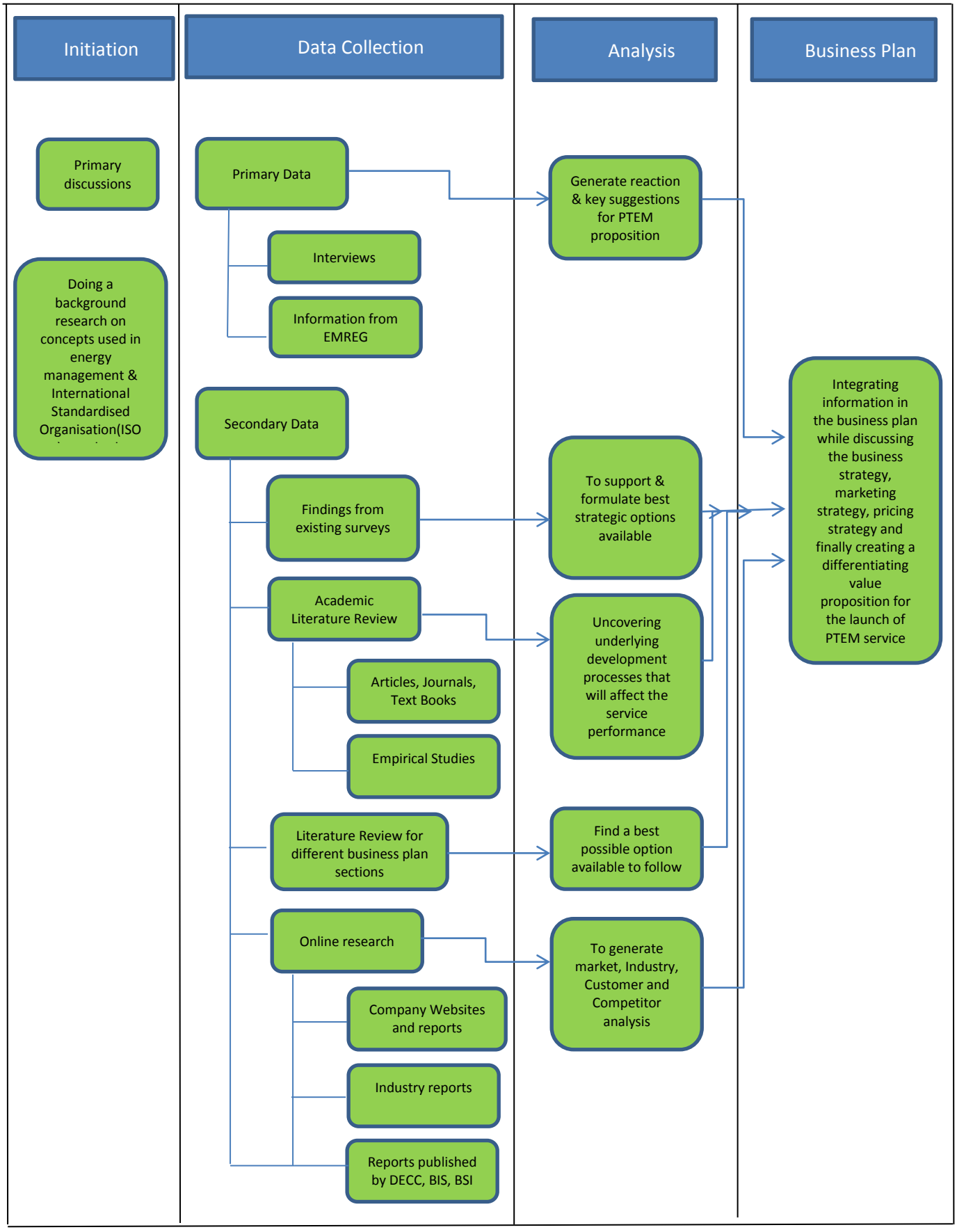

Figure 2 – Outline of Study Approach

3.2 Research classification.

The purpose of the research is to identify and analyse the market and its energy management needs. Based on this, a comprehensive business plan is expected to be developed with the aim of putting EMREG in a competitive position to launch its PTEM.

There are many way of classifying research, however Collins and Hussey (2009), after studying the various characteristics of different types of research and identifying similarities and differences, has classified research into four broad categories.

1. **Purpose** – reason why it is conducted (i.e. exploratory, descriptive, analytical or predictive research)
2. **Process** - the way in which data was collected and analysed (i.e. quantitative or qualitative)
3. **Logic** – whether research logic moves from general to specific or vice versa (i.e. deductive or inductive)
4. **Outcome** – whether the expected outcome is solution to the case or a general contribution to knowledge (i.e. applied or basic)

On the basis of above classification given, the research conducted in this document is classified as per the Table 5.

Basis of Classification	Type of Research
Purpose	Predictive Research
Process	Qualitative
Logic	NA
Outcome	Applied Research

Table 5 – Research Classification

The research outcome will seek to provide a calculative and informative approach for EMREG to consider the options available while giving a clear picture of the industry environment. On this dimension, the report is classified under predictive research.

Qualitative research takes an interpretive, naturalistic look at the subject matter and focuses on a much smaller sample as compared to quantitative research in order to not to

isolate critical variables. (Saunders et al, 2009). Qualitative method was identified as suitable for this study because there was the needed to understand the specific reactions towards the new concept. This method helped in providing key findings, which would form a set of valid recommendation based on depth understanding of the market and the service concept.

For research based on outcome, the applied or basic research approaches are options that were available for this research. Basic research are primarily undertaken to understand the business and management processes and their outcome. Such research usually has a strong focus on the academic environment with little attention to the practical applications. Applied research on the other hand focuses on information, which is relevant to managers and is presented in a manner that can be interpreted as such. The reports outcome is categorised under applied research, as the study is designed to apply the findings to solve the business case and improve existing knowledge. The research done in the project is of direct and immediate relevance to EMREG, as it seeks to address the issues that are of importance in launching the service proposition, and is presented as Such.

3.3 Sources of Data & Data Collection Methods

The method used for data collection of this report is a mixed method approach and within this approach, a mixed- model research has been followed. A **Mixed-model research** uses a combination of both qualitative and quantitative data collection methods and analysis procedures together with other approaches at different stages of the research. (Saunders et al. 2009)

In doing this, primary and secondary sources of data was identified using in depth interviews with industry experts and journals, company websites, university database and articles respectively and later compiled and analysed. Other sources of information were obtained from intelligence reports and some relevant company reports. Surveys' using online sources/websites like survey monkey were an option to consider, but this option was not pursued. Using such survey would have lacked the depth of information that is required for this report. This report necessitates an understanding of all aspects of the business model, as

such; online surveys would not be the appropriate choice as this was likely to result in one-off answers.

The primary means of data collection for this study comprised of; face to face, telephone and Skype interviews with people from SMEs, industry experts and energy related institutions. Regular meeting with the company EMREG were conducted to get information on the market and other key aspects. This method was followed because depth interviews are mainly used to obtain much deeper probing into the subject and to clarify concept. (Hair et. al., 2011). In terms of generating the contacts to collect primary data, various sources were exploited and this is discussed under selection process of methodology.

The secondary sources of data were obtained from the following sources:

- Online databases available at the university (ABI Inform, Proquest, Emrald, Nexis) – *to cover a breath of study on our academic literature covered in different section*
- Academic dissertations – *to familiarize us to the different section to be covered*
- Textbooks on service marketing, research methods, business strategy, entrepreneurship, new venture creation – *to find a best possible option for EMREG to implement the business plan and support our findings*
- Company reports and industry reports – *to do industry, competitor and market analysis*
- Company websites – *to get information on companies and understand the breadth of services offered*
- Information provided by EMREG – *regarding the company resources, plans, strengths, weaknesses and opinions on formulating the PTEM service*
- Secondary surveys & reports available online – *to further support our primary findings and uncover other key findings*
- DECC, EEF, BSI, BIS and DEFRA reports – *to get a better understanding of the energy management systems and use key information*

Content analysis was used in most instances to obtain qualitative data by analysing the data available. Such data tends to identify recurring themes and identify various information

available in the text through systematic analysis. (Quinton S, 2006) This process gave an insight into the nature of the market as well as consumer behaviour towards service firms.

The use of both qualitative and quantitative research is identified in this section as most useful to this research. The next section will discuss in detail the primary research procedure and how it will be incorporated in the business plan.

3.4 Primary Research Procedure

Selection and Interview Process

A business research will typically involve collecting information to improve the decision-making, and may involve contacting knowledgeable people (population) in the field of study. (Hair et.al, 2011). In selecting the population, the sample must reflect the characteristics of the population in order to minimise errors associated with sampling. (Silverman D, 2005)

In achieving this, the most relevant sources of information were first identified through research on particular firms, industry or sectors that are most relevant to energy management. The participants were later contacted by exploiting university contacts, business breakfast meetings where a number of SMEs were represented, chamber of commerce, referrals by other SMEs whom we had made initial contact.

The interview process was preceded by initial face to face contacts and followed by emails to the participants to secure appointments for the face to face or telephone interviews depending on which was more suitable for the participants. Interviewees were provided with briefs of the project as well as consent documents prior to the interview date to familiarize themselves with the purpose of the research and how the information was going to be utilized in the report. The interview process involved department heads, operation directors and managing directors of SMEs as well as others who were holding key position in institutes advising SMEs.

All interviews were conducted in English and recorded. Eleven interviews were conducted over the course of our research. The interviews conducted spanned between 45 and 75

minutes and was carried out through the various media mentioned above. Ethical issues were spelt out in the brief given out to participants and they were given the assurance of confidentiality of the information being given, unless they consented to disclosing the information to other third parties.

The sources of the most relevant information to this report are identified using all relevant contacts. The next section looks at the structure of the interviews conducted in terms of the mode of interviews, time spent and the development of the questionnaire.

3.5 Interview structure

Even though qualitative research may be limited in scope, it offers a depth of information, which enables the researcher to see how different actions can lead to different outcomes. (Hair et.al, 2011) This informed the interview process in a quest to identify various responses to different situations. In the context of EMREG, this method was very valuable in getting the opinions of SMEs and other industry experts on the business concept, and reflects a true representation of the scope/ demand for this service.

The quality of the research conducted is dependent on the research questions, and these are theoretically informed. It is therefore essential that the right questions be asked in order to elicit the response that can be useful to the recommendations in terms of the business plan. In order, develop the right questionnaire, which highlights the reactions on PTEM concept, a questionnaire was developed with the help of an external marketing agency with which EMREG is associated. A detailed questionnaire for the market research was developed following modifications and further communication via emails after initial meetings. (Refer to Appendix B).

The interview questionnaire was structured to address both specific questions as well as giving open questions to get as much information as possible. The questionnaire is mainly divided into five main sections namely (1) Current Business Issues and Challenges, (2) Managing & Reducing costs, (3) Attitudes and Behaviours towards Energy management, (4) Understanding the current situation, (5) Reaction to PTEM proposition.

Table 6 – Interviews details shows the role and description of the interviewees, the mode and date of the interviews.

WHO (ROLE AND DESCRIPTION OF THE ORGANISATION)	MODE OF INTERVIEW (PHONE/SKYPE/F2F)	DATE
Managing director of a company responsible for building management, maintenance and energy usage	Face To Face	27/07/12
Board director of a healthcare service team	Face To Face	23/08/12
Director of a company that supports SME on environmental and energy related issues	Face To Face	16/08/12
Project officer of a company that supports SME on environmental and energy related issues	Face To Face	16/08/12
Project officer of a company that supports SME on environmental and energy related issues	Face To Face	16/08/12
Managing director of a company responsible for design and manufacture of injection mould tooling and plastic component	Telephone	06/08/12
Operations director of a company responsible for manufacturing of aluminium and steel, printing and electronics	Telephone/Skype	25/07/12
Owner of a company responsible for managing energy efficiency in academic institutions	Skype	24/07/12
Energy manager of an institution	Face To Face	17/07/12
Operations director of a company that manufactures thermal and acoustic mineral wool products for the construction sector	Telephone	26/07/12
HSE manager in a multinational abrasive manufacturing company (survey only includes the plant in West Yorkshire which is considered as a SME)	Telephone	23/08/12

Table 6 – Interviews details

3.6 Data Analysis

This section discusses the analysis method used in the research. The data obtained are analysed and categorised in order to have more relevance to this study. Both qualitative and quantitative methods are discussed in detail.

Quantitative data

The data identified from secondary sources listed above were very wide and varied in scope, as well as purpose. The data collected was analysed and later categorised to identify the recurring themes. In doing this, graphs, pie charts, histograms and statistical analysis were used to analyse the pool of data that was available.

In finding specific data values, tables were used to identify and examine the interdependence as far as the data available is concerned (Saunders et al, 2009). Pie charts were used to show proportions as seen in the case of the market segmentation. These methods were used in order to generate the right information through comparisons to establish relationships between the variables (Saunders et al, 2009).

Qualitative analysis

The approach used for the analysis of the primary information is a blend of both deductive and inductive approaches. The latter approach refers to the process where information/ data is collected and later analysed to identify the recurring themes to follow up on. The former refers to the process of employing the use of existing theory to inform the research questions. (Yin, 2003: cited in Saunders et al, 2009). Using a purely deductive approach was not used in order to avoid the situation where the responses received deviated vastly from the theoretical backing (Saunders et al, 2009). On the other hand, using a purely inductive approach was considered unsuitable considering the time constraint and the limited resources available for this project (Saunders et al, 2009).

In analysing the primary data, the information recorded was first transcribed and read in-depth to identify common themes which would help in the recommendations.

3.7 Limits of the Study

There is acknowledgement of the limitations to this study and the implications it can have for the outcome of this report. These limitations are further discussed in the following text.

Sample size: the sample size used for the primary research in this report is very limited, with 11 interviews in total. This may not represent a true picture of the response to the concept being investigated as the information given is only limited to few people and in few companies, considering the scope of the market that is being targeted.

Selection process: In addition, the definition of the sample/ participants to interview in the primary research was done at a random basis rather that systematic screening. This is attributable to the limited period available for this project and as such, the results obtained may not match or fit the target customer segment since this was only defined after a detailed analysis on both primary and secondary data.

Information: The information obtained and used by the participants may not reflect the actual response due to the newness of the service. The objectivity of the responses given cannot be validated as these were mainly based on perception rather that an actual feeling in the case of an already existing service.

Some of the Information sourced from primary data sources were not originally made to address the issue as far as this paper is concerned. Such data has subsequently been interpreted by the writers of this paper and used within the context of the service proposition. Putting the service within the context may have inaccuracies and can affect the outcome of the report. The limitations identified have to be taken into consideration and the necessary adjustments have been made to cater for the variances.

The sample size, selection process and the data available are identified in this section as the main dimensions on which the limitations fall and are discussed in detail.

3.8 Implications for the business plan

The research was conducted with the aim of informing various aspects of marketing, strategy and the financial modelling of the business plan. The information gathered indicates that there is a clear need for PTEMs within the SME sector. However, this need is met some reluctance due to challenges faced. This is valuable information for the business plan as the strategies that will be suggested for the plan will have to address these factors adequately.

The information gathered from the primary research will be used together with secondary data obtained to inform strategies to be adopted by EMREG in order to ensure a successful launch and gain competitive advantage. Since PTEMs is a very customer centred service, the views and receptiveness towards this service is essential to inform the prime decision: i.e. whether or not EMREG should go into this venture.

4 ANALYSIS

Analysis section has formed the backbone of the strategies designed in the business plan section. The summaries of major qualitative and quantitative data from the primary and secondary research are included here. In Appendix C, all the interviews' key findings are provided for further background. Additionally, some extra primary and secondary data are also used within business plan where necessary.

This section will assist to understand the environmental consultancy industry in terms of trends, size, competition and external forces.

4.1 Industry Trends

EMREG is operating in environmental consulting (EC) industry. Environment Analyst has done a survey with more than top 50 EC companies in 2011[1]. The survey results revealed the key trends in EC industry that are relevant for EMREG as;

- The government cuts reflected on consultancy revenues and will lead to further reduction in the future especially in the public sector. Between 2009 and 2011, £96 million in public spend was lost from the environmental consulting market[1].

- Adjusting to and complying with legislation remains the key driver for environmental consultancy services[2] (See
- Figure 3)

- Energy management (including green buildings and renewables) is identified as the growth area by more than two in five respondents. Carbon measurement, management and reductions are also considered to have positive prospects[1] (Refer to Appendix D)

[1] ENDS (2011). Consultancy Market Guide 2011
[2] Environmental Analyst (2012). UK environmental consulting market shows return to limited growth

Figure 3 – Main drivers for UK consultancy

4.2 Size and Growth

According to recent market intelligence report published by Environment Analyst, the UK EC industry grew by 0.7% in 2011 and reached at £1, 22 bn2, as shown in Figure 4.

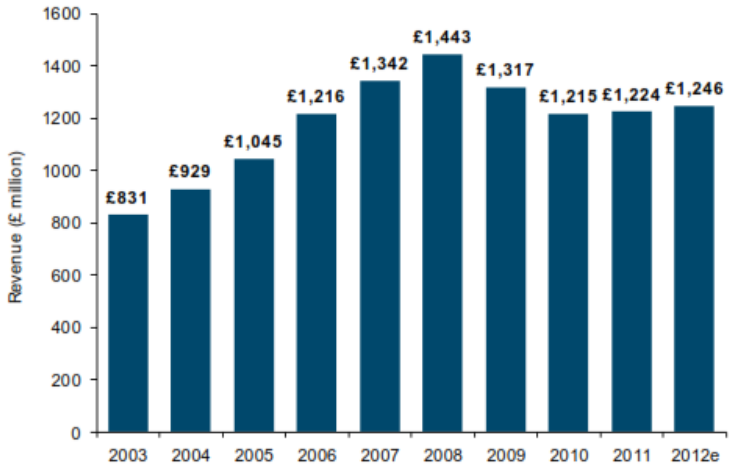

Figure 4 – UK Environmental Consulting Market Revenues 2003-2012e (in £mil.)[2]

The PTEM concept will compete as a differentiated service specifically designed for SMEs in UK. It will enter the 'Climate change and Energy' service line in the market. The climate change and energy services include monitoring and targeting; energy management systems; energy audits; installation, operation and maintenance of equipment; low cost finance; and fuel and electricity purchasing[3].

[3] SUSSEX (2012). *The Energy Services Industry* [Online]. Sussex University. Available: http://www.sussex.ac.uk/Units/spru/publications/reports/barriers/finalsection7.pdf [Accessed 03.08 2012]

The Figure 5 represents the market breakdown and the climate change & energy service market is calculated as 9.2 per cent of the total industry and this leads to a total of **£113 million market size**[2]. This size should be further breakdown into SMEs and large corporations in order to find the exact size of the market that EMREG will operate in.

Figure 5 – UK Environmental Consulting Market Revenues 2011 (in £mil.)[2]

Stuart Foxon (2012) from Environment Analyst emailed to our request for the breakdown information as;

> 'We calculate that about 40% of revenue is from FTSE 350 companies. That said, our results are weighted towards the larger consultancies as we get in a lot of information about these firms.'

Therefore, there is no data available for such a break down to calculate the exact market size. A best estimate will be used to find out the total market size for EMREG, explained below.

It is stated that as the climate change and energy efficiency pressures are increasing, consultancies find clients from various industries. But, it is reported that SMEs prefer to get help from free services such as Environmental Agency's NetRegs service and green business clubs and networks rather than from consultancies[1]. Therefore, it can be reasonable to

assume that within environmental consulting industry, revenue generated from SMEs in 'climate and energy services' market is 20-40% of the total 'climate and energy services' market which leads to **£22.5 – 45mn** size.

It is reported that in 2011 climate change and energy services declined by 12.5% compared to previous year, hit by government cuts and changing priorities within industry[2]. Although this decline is caused by one major consultancy who is strong in climate change and energy services particularly in the public sector. Climate change and energy services are still expected to grow and one of the greatest opportunity for consultancies in 2012. It is predicted that 1.8% growth in 2012 as the UK market continues to rebound; however, it is not expected to reach its record value of £1.45 billion in 2008 during the next five-year time period[2].

Regarding the breakdown of the market in terms of public and private sector, public sector consultancy represents 28% of the total environmental consultancy market[2].

4.3 Competitor

Detailed analysis of competitors is critical to understand the degree to which a business has a position of competitive advantage[4]. In order to build a competitive strategy, a business should position itself to maximize the value of capabilities that differentiate it from the competitors. It may also provide valuable information how the competitors can response[5].

This section will address three main questions which give strategic information for business strategy and marketing strategy of EMREG.

- Who are the competitors of EMREG?
- Which services do they offer?
- What are their strengths and weaknesses of the competitors?

[4] BEST, R. J. (2009). *Market-based management : strategies for growing customer value and profitability,* Upper Saddle River, N.J. ; London, Pearson/Prentice Hall.
[5] Porter, M. E. (1980).*Competitive Strategy: techniques for analysing industries & competitors*, Free Press: N-Y

Data is collected mainly through internet sources (websites, reports and news) and primary research data. Due to the time and source limitations, it is important to analyse competitors through the lens of several customers from various industry and geographical regions, suppliers, relevant institutions and industry experts to perform a deeper understanding and evaluation of competition.

Considering EMREG, as a new entrepreneurial) venture, needs to differentiate from the competition to survive in the market (see business strategy section 5.2). Therefore, competitor analysis provides strategically important information to position EMREG within the competitive environment.

Who are the competitors of EMREG?

As it is set in the previous chapter 4.1, EMREG's PTEM service is being designed to compete in Environmental Consultancy industry, particularly in SME market. This market has several players who can be direct and indirect competitors for EMREG today and tomorrow.

There are various methods can be used to analyse the competitors' of EMREG. Perceptual mapping, competitor array and strategic group methods are some of the tools used by todays' business world. Perceptual mapping tool which divides the competition into sub segments through the customers is not applicable due to the limited data available. For the same reason, competitor array needs a more comprehensive data collection and provides a quantitative analysis is also not applicable. Therefore, a broader evaluation tool, strategic group, is chosen for this purpose.

It is reported that 'The UK environmental consultancy sector remains highly fragmented, with the 30 firms each achieving revenues in excess of £10 million, accounting for 67% of the total market when combined'[2]. More than 675 firms are reported as active in the UK environmental consulting sector and out of 675 approximately 140 achieve sales more than £1mn[2].

Since it is not feasible to analyse all of these 675 firms, selected companies will be presented in this section. Selection criterion is based on the strategic group segmentation so that at least an understanding of each group provides the positioning of the competition. A list of all the competitors and their profiles are achievable by a report sold by Environmental Analyst Ltd for a price of 1050£ and this information is shared with EMREG. On the other side, there is a list of name of the competitors available in the Appendix E.

Strategic group is defined as 'a group of firms in an industry following a similar or identical strategy regarding relevant dimensions'[6]. Product range, geographical breadth, choice of distribution channels, level of product quality, and degree of vertical integration and choice of technology can be the few examples of these strategic dimensions[7]. It is possible to identify which strategic group will provide the best payoff for EMREG to be in and further analyse the competitors in this group. It is also very useful in identifying strategic niches within an industry[7].

In mapping groups, strategic dimensions should be chosen carefully: they should not move together, and reflect the diversity of strategic combinations on the industry[5]. Therefore, Service diversification and target business size is chosen as map axes. Considering that EMREG will serve to a niche market with limited resources, It can be concluded from Figure 6 that EMREG will belong to Boutique2 strategy group as the start of the business. EMREG will be also exposed to rivalry from Boutique1, Utility and Non-For-Profit and Free services.

After determining the strategic groups, now services of these primary competitors will be presented.

[6] Porter (1980) cited in Dornier et al., (2012)
[7] GRANT, R. M. (2010). *Contemporary strategy analysis : text and cases,* Chichester, John Wiley & Sons.

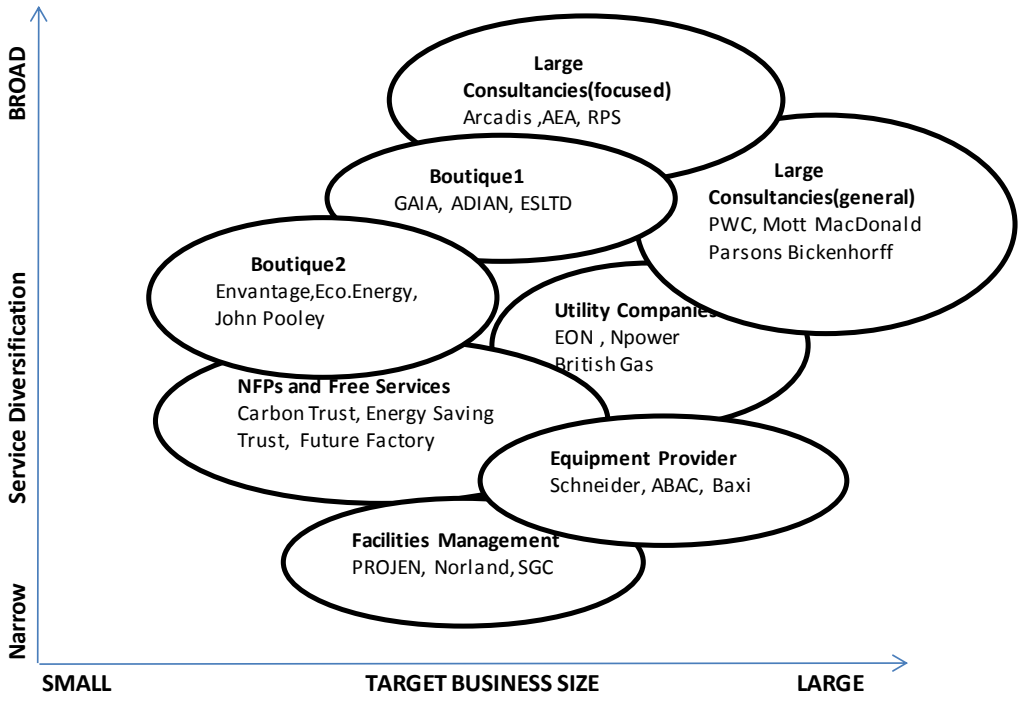

Figure 6– Strategic map of competition in environmental consultancy

Services offered by primary competitors

Boutique1: This strategic group mainly offer services around sustainability and environmental needs of medium – larger enterprises. GAIA and ADIAN offer similar services as PTEM proposition for the clients who needs a complete sustainability or environmental management systems for a period of time. However, the emphasis on PTEM is not the same what EMREG is trying to achieve. They have blue chip clients and also medium sized ones.

Boutique2: This group mainly focus on energy efficiency and target primarily medium sized enterprises. Services focus on energy efficiency, management and pricing. They claim to save money through energy efficiency offerings.

NFPs and Free Services: This group is generally supported by local and national public funding. Therefore, especially their offerings become limited after budget cuts by government such as Business Link. Within this group, Carbon Trust is one of the biggest one who can provide various advisory services (audits, investment appraisals, change management) for organisations.

Utility companies: This group is strategically important for EMREG since they started to focus on energy service side of business and can offer unmatchable comprehensive package for all size of businesses. For instance, E-on has special services called 'carbon consultants'; British gas segmented its business into home, business and (SMEs) and corporates (large) and separate energy services for each segment needs; Npower segmented into home and business, and business into sub segments as low energy (<15k, medium energy(15k – £1mn) and high energy users(>£1mn). It should be also noted that SMEs increasingly prefer to take advice from their energy suppliers according to the Business Survey Index done by Npower[8].

[8] NPOWER 2011. Business Energy Index (2011)

Strengths and weaknesses of the primary competitors

Boutique1	*can offer variety of skills and expertise *has a proven track record of success (case studies) working with a wide range of clients across * certain years of experience and accumulated knowledge * can provide full environmental package services not only energy management * strong and experienced human capital	* not focused on energy where SMEs can benefit cost savings more out of overall sustainability services * needs to grow to since utility and large consultancies may attack their portfolio
Boutique2	* focused on energy management * can serve niche markets and has strong relationship with SMEs * simple and effective message ' cost saving through energy efficiency' * can offer a better value for money to small-medium organisations	* narrow industry and customer portfolio, more risk * tight cash flow * limited resources
NFPs & Free services	* low cost/no cost * approachable and attractive for SMEs	* funded by government * limited pressure for developing brand and revenue * low marketing resources
Utility	* capability, resources and experience * knowledge and data from the current clients * easy for SMEs to contact * trustable partner * technology * one stop shop *already 'in' the clients	* need for increasing utility revenues at the same time offering energy services to reduce consumption * intense competition from other energy suppliers * shift to renewable energy

Table 7 – Strengths and weaknesses of competitors

Implications for EMREG

As it is presented in competitor analysis, industry is highly competitive and surrounded by several different players who have various resources and capabilities. Considering the fact that UK government set very challenging targets and increasing awareness of the community and business about the climate change, industry can be seen as attractive. Many new entrants and competition may become even more intense in coming years.

Members in a same strategic group may target the same consumers and quickly imitate a rival action[9]. According to resource-based view, differentiation in resources benefit to a firm by making them less exposed to competition[10]. Firms in the periphery of their strategic groups (also called as secondary firms) would be most successful ones in the industry[11].

Based on these facts, it can be derived that EMREG needs to differentiate from competition in Boutique2 strategic group and also attract customers belongs to Boutique1. Details of the differentiation will be presented in the business plan (Section 5).

[9] McGee et al. 1995 cited in Dornier et al., (2012)

[10] Barney, 1991, Hatten & Hatten, 1987, Nelson, 1991;Rumelt, 1984; Wernerfelt, 1984 cited in Dornier et al., (2012)

[11] DEEPHOUSE, D. L. 1999. To be different, or to be the same? It's a question (and theory) of strategic balance. *Strategic Management Journal,* 20**,** 147.

4.4 Drivers

There are both internal and external factors that drive companies to implement energy and environmental management systems within their organisations (see Figure 7). The major drivers that can be significant for EMREG will be summarized in this section.

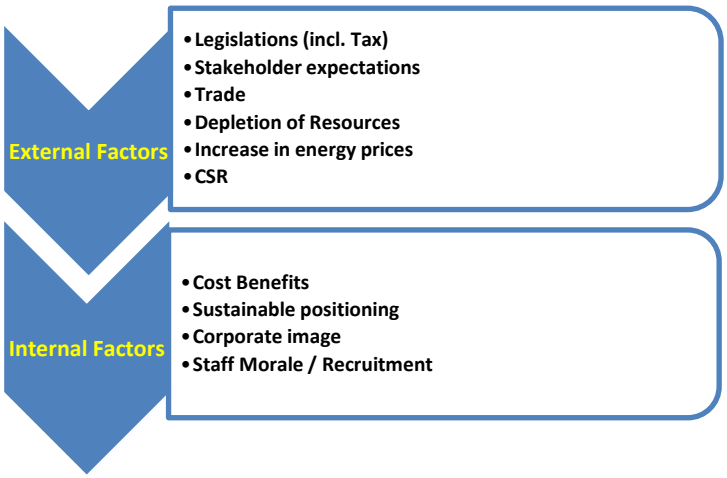

Figure 7 –Drivers for SMEs

According to the EEF Climate and Environmental Survey, key drivers for managing and climate change impacts in UK manufacturers are shown below in the Figure 8[12]. Costs, adhering to an EMS, legislation, increasing competitive advantage are the top drivers. Although this data is not fully representing the SMEs and energy services, provide a useful understanding of the current situation.

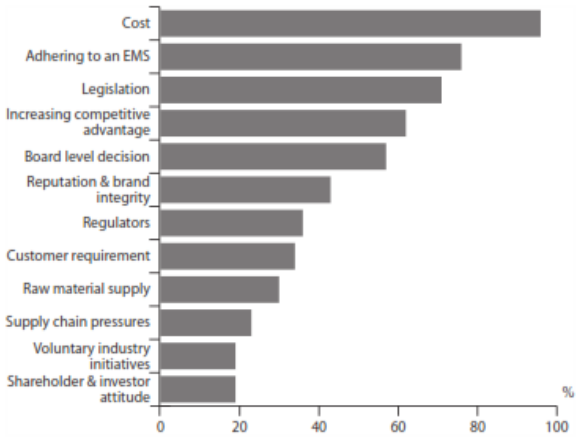

Figure 8 - % of companies showing environmental improvement areas

[12] EEF (2012). Managing Green and Growth:A survey of Manufacturers. EEF (The manufacturer's oragnisation)

Cost & Increase in energy prices

It is argued that SMEs benefit from implementing energy management systems that result in lower costs and better bottom line figures[13] . SMEs can mitigate the risk of rising energy prices (See Figure 9) increase as well as decreasing their consumption by implementing more efficient processes and equipment.

Organizations indulging in energy management systems will see energy cost reductions. It is common for an organization to realize a 10% to 20% reduction initially through the identification and then the commitment to invest in more lucrative measures[14].

The results also reveal important evidences about the financial benefits of energy efficiency. Research done by Experto Credo[15] shows that 60% of the surveyed SMEs that acted to reduce carbon emissions benefited cost savings. Another research done by Npower[8] stated that 58% of the SMEs achieved in up to 10% savings. Furthermore, 86% say adoption of formal EnMS would be likely if it demonstrated cost savings[16]. Although limited quantitative data for savings is available, it is reported that an annual average saving of £4,875 per £m turnover is gained by the majority of SMEs who have environmental management system surveyed by WYG[17].

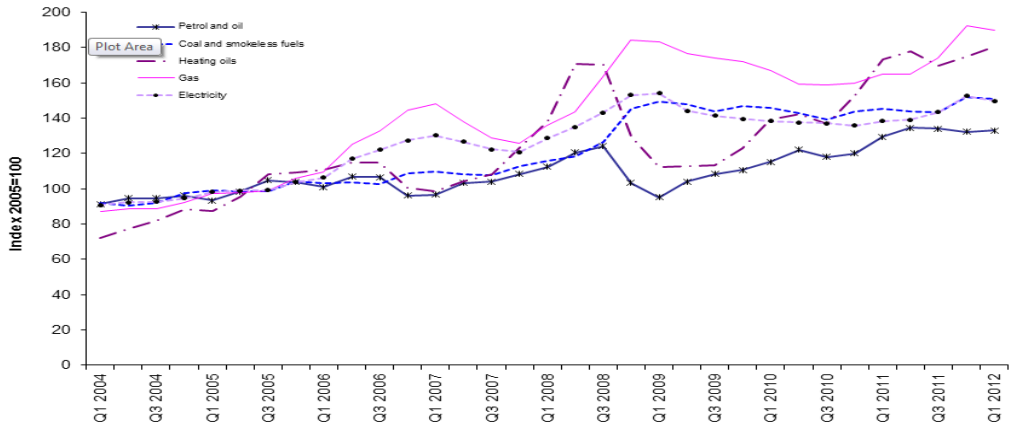

Figure 9 – Fuel Price indices in real terms Q1 2004 to Q1 2012[18]

[13] Middlesex University(2009). *SMEs in a Low Carbon Economy*
[14] MILLS, K. & YOUNG, P. 2012. ISO 50001: How Manufacturers Manage Energy. *Material Handling & Logistics*
[15] EXPERTO CREDO (2009). UK Business Carbon Top3Map
[16] BSI (2009). Energy Management in the UK. British Standard Institution
[17] WYG (2011. Evidence Based Study into the benefits of SMEs for SMEs
[18] DECC (2012). Energy Prices Statistics

Legislations

Regulation can be seen as both a challenge and opportunity for businesses. It is argued that more efficient and environment-friendly processes can help businesses to become more competitive, obtain new markets and 'first mover' advantages[13].

The Climate Change Act 2008 encourage the transition to a low-carbon economy in the UK through a reduction of at least 34% in greenhouse gas emissions by 2020 and at least 80% by 2050[13]. Therefore, the UK government has put in place series of legislation and policies in the bid to ensure that companies indulge in efficient energy management systems. Amongst some of them are : Carbon Reduction Commitment (CRC) Energy Efficiency Scheme, UK Emissions Trading Scheme, Carbon Reduction Commitment Energy Efficiency Scheme (CRC EES) and Climate change levy[19]. In addition, Carbon price projection reveals that carbon price will increase up to 200 £/tCO2e from 14 £/tCO2e by 2050.

On the other side, government encourages organisations by regulate taxes to promote green energy and energy efficient equipment. Enhanced Capital Allowance (ECA) and upcoming Green Deal make investments more attractive for companies.

According to the BSI[16], 78% of the participant companies stated that they are likely to adopt energy management systems if mandatory targets are introduced by government and a general feeling for need to comply with legislative requirements was also highlighted.

Increase in competitive advantage

Many researches and analysis show that organisations can develop their competitive advantage and sustainable position by implementing environmental processes and policies. These advantages can be directly affect the business such as gaining new customers and increase in turnover also indirect such as increase in staff morale and better employee retention which will give a long-term benefit to the firms.

It is stated that there are opportunities for the development of new domestic and international markets due to the increase in demand for low carbon / more sustainable

[19] DECC. 2012. *Policy & Legislation - Department of Energy and Climate Change* [Online]. Available: http://www.decc.gov.uk/en/content/cms/legislation/legislation.aspx.

goods[13]. Increasingly, stakeholders (governments, NGOs, communities, investors, etc.) expect that corporations should engage in ethical practices and the use of efficient energy management systems. Furthermore, another important aspect is the sustainable procurement. More and More large companies such as Wal-Mart and Tesco are requesting their suppliers to be more environmentally friendly for the continuation of their relations[13]. It is reported that just over a third of SMEs achieved an increase of £14,961 per £m turnover in the second year of implementing EMS[17].

Although there are evidences that impact of company size on CSR being contradictory, owner-managed SMEs are not necessarily driven by profit maximisation, often demonstrates a strong commitment to their employees and are more likely to be embedded in their local environment[20].

The secondary data research also provide evidences that SMEs tend to implement an low carbon process if they benefit from more marketing opportunities and better relationship with their clients[13] 24 per cent of SMEs believe that reducing their carbon footprint will deliver new business opportunities[8] and research done by Experto Credo[15] shows that 30 per cent of the surveyed SMEs that acted to reduce carbon benefited better relationships with customers and 10 per cent benefited unique selling points.

4.5 Barriers / Challenges

They are internal and external barriers identified for SMEs to implement energy efficiency processes and management systems[13]. However, primary and secondary research reveals the fact that internal factors play a majority role in implementation of EnMS. It will be worthwhile to know these internal barriers in depth while creating a value proposition. Having said that, few external barriers that should be addressed are highlighted to give a complete view. These external barriers are low visibility of SMEs against regulations, limited infrastructure support for environmental management and limited green supply chain pressure[13].

[20] Grayson, D. and Dodd, T. (2007) '*Small is sustainable (and beautiful) – encouraging European smaller enterprises to be sustainable*', Doughty Centre for Corporate Responsibility, Cranfield University – available at: http://www.som.cranfield.ac.uk/som/research/centres/ccr/downloads/Small_is_%20Sustainable.pdf

Regarding the internal barriers, the major themes are identified from the primary and secondary data. **Uncertainty on return on investment (ROI), limited funding sources, management time and culture** of the SMEs are found as main barriers to invest on energy efficiency.

Uncertainty on return on investment (ROI)

Companies find it hard to implement and spend on energy management systems due to inability to estimate how much costs can be saved[16].

As a general outcome from the primary research (Appendix C) reveals that SMEs do not want to pay upfront cost for a consultancy service without gaining real financial benefit.

The managing director of a SME (Appendix C) providing facility service to environmental businesses shared his comments on this issue during the interview;

> 'It might be not interesting for me if a company offer me an energy audit for £2000 for this amount of saving but there is no guarantee. I might be more interested if somebody comes along and says; we will share the risk for you, we will work with you and after 4 months we will be paid from your savings'.

Limited funding sources and management time

According to the Npower survey[8], 72 per cent of the SMEs don't have time and 78 per cent of the SMEs don't have cash to invest in energy efficiency as shown in the Figure 10. This is also supported by Middlesex[13] and EEF[12] reports (See Figure 10 and Figure 11) which state time and resources as the main internal barriers for SMEs.

	Management time		Cash resources	
Response	SMEs (7)	SMEs (8)	SMEs (7)	SMEs (8)
Yes	31%	28%	34%	22%
No	69%	72%	66%	78%

Figure 10 - SMEs replies whether they have time and cash to implement EnMS[8]

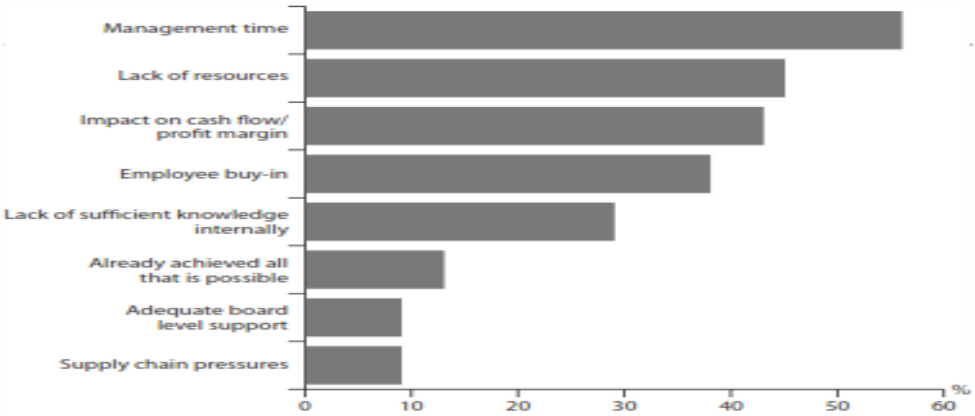

Figure 11 - % of companies citing barrier to improving Performance in at least one of their top 3 environmental areas[12]

Primary data analysis also strongly supports the secondary research. For instance, energy manager of University of Nottingham (Appendix C) stated that;

> 'Consultancy should quickly get use the facilities and understand what is required. All in all save initial time'.

And he added that if the consultancies keep the initial cost low, companies would be more interested in to buy-in services like PTEMs.

Operation director of manufacturer (Appendix C) that produces thermal and acoustic mineral wool products for the construction industry highlighted the importance of funding and added that;

> 'Access to knowledge is not a problem its access to cash, funds'.

Culture

Studies[21] done by shows that environmental management is seen as win-lose rather than win-win by owner-managers i.e. winner is the environment not the company.

A business owner of an energy service company (Appendix C) mentioned the importance of the behaviours of the employees towards energy management. He told that;

> 'Don't get into and do a consultancy service and walk away. 6 months later they will stop what they are doing'.

The managing director of a SME (Appendix C) providing facility service to environmental businesses added that;

> 'The politics inside the company is critical. You might say a company after an audit that they can save £100K, but it can be vulnerable to some employee and they might be fired. If the ideas or recommendations are done together with the stuff, it would be easier to get the contract and implement the system'.

There is also common reflection from the primary research participants that there is a barrier within SMEs to implement energy management systems due to lack of ownership and accountability. Senior buy-in and staff engagement are mentioned as critical factors to be successful whilst implementing a management system.

[21] Revell 2002, 2003a & 2003b cited in MIDDLESEX UNIVERSITY. (2009). *SMEs in a Low Carbon Economy* [Online]. Available: http://www.mdx.ac.uk/Assets/SME%20in%20a%20low%20carbon%20economy.pdf

4.6 SUMMARY and IMPLICATIONS

The information presented in this chapter demonstrates a solid understanding of the environmental consultancy industry. Trends, market size, competition, drivers and barriers to shift to a low carbon are covered.

It is seen that although market shrunk last year due to the government cuts, growth is expected in coming years. Considering the national and international targets on climate change, industry will certainly grow in long-term.

There are certain barriers towards energy management implementation for SME and major consideration identified is towards cash and time.

Overall, EMREG will compete in growing and competitive industry where differentiation becomes critical for the survival of the business. EMREG should also resolve the issues of SMEs by creative value propositions. The business plan will explain how EMREG will win in the market and assess the PTEM concept viability and feasibility at the end of the business plan.

5 BUSINESS PLAN

The business plan highlights the strategies and economics adopted for the design of the new service to be offered to the market. It integrates the findings from NSD and analysis whilst making use of the primary and secondary research data. Besides this, creative solutions are adopted into certain aspects of the business plan to create a sustainable, unique position for EMREG. At the end, an overview is provided to assess the feasibility and viability or otherwise of PTEMs concept.

5.1 The company and the Concept

EMREG (East Midlands Renewables Energy Group) is an established boutique energy consultancy in renewables and sustainable energy systems located in Newark, Nottinghamshire, operating for 5 years. EMREG as the parent company involves two sister companies which are EMREG Consulting Ltd. and EMREG On-site Ltd. EMREG Consulting offers pure consultancy services such as energy surveys, introducing renewables and sustainable energy systems, and energy management systems and has existing portfolio of customers. Now, EMREG will position EMREG On-site as a new venture which will deliver substantial energy savings for companies and offer first class advice whilst focusing on-site energy management services.

Many of EMREG On-site Ltd. services will be the 'delivery' stage of the advisory and planning services provided by EMREG Consulting Ltd. i.e. ranging from actively installing and running energy management systems, training staff and bringing about cultural and behavioural changes.

EMREG considers that there is a need for externally sourced part-time energy managers (PTEM). This need i.e. business opportunity is not only exploited with several aspects but also assessed and verified throughout the business plan and concluded with a screening tool where all the major parameter are taken into account. However, since the PTEM concept will be offered as a differentiated and unique service, the assessment may not provide 100% accurate outcome. The literature discussed on NSD is used to benefit the relevant features in developing the business plan and increase the success of the new venture in the market.

PTEM is designed to address the current and future challenges and barriers of SMEs to shift towards a low carbon economy. PTEM concept is designed specifically for SMEs who have limited resources and capabilities to implement energy management systems in their current business structure. PTEMs will act as full-time employees for SMEs primarily aiming at reducing energy bills and carbon emissions.

It should be noted that this positioning requires a unique marketing design with a new brand, logo and web site which will be provided by a B2B Marketing Company hired by EMREG called Earnest. Therefore, this business plan will not focus in detail the practical elements of the marketing rather give strategic level information.

The details of the business strategy are discussed in the following sections.

5.2 Business Strategy

This section will first give a short brief of the relevant strategic options, rationale of the best strategy for EMREG and provide practical information based on that strategy. It should be noted that both EMREG as an entrepreneurial venture (neither an established SME nor a corporate) and PTEM as a differentiated service (neither standard nor radical innovative service) leads to a unique business case which requires a customised perspective whilst building a strategy (See section 2.4 Types of NSD).

Strategy is a unique and valuable position that a company holds with regards to its competitors[22]. PTEM service will be the premier offering of the new venture EMREG. It faces unique strategic challenge in order to build business out of it and make it grow which is sustainable in longer term within a competitive environment. The performance of EMREG will be directly linked to the competitive positioning within the market and the ways it differentiates the delivery of service on offering.

[22] PORTER, M. E. (1996). WHAT IS STRATEGY? : Harvard Business School Publication Corp.

Within the spectrum of the *generic strategies*[23], there are (at least) three options: (i) cost leadership, (ii) differentiation, and (iii) focus on a market niche. (See Figure 12). According to the generic strategies, firms should choose only one to be successful; otherwise there is a risk of being stuck in the middle. By combining the best features of low cost, differentiation, and/or focus strategies, young and small firms can often achieve something distinctive[24]. Therefore, it is also possible to define multiple strategies for the various stages of the business.

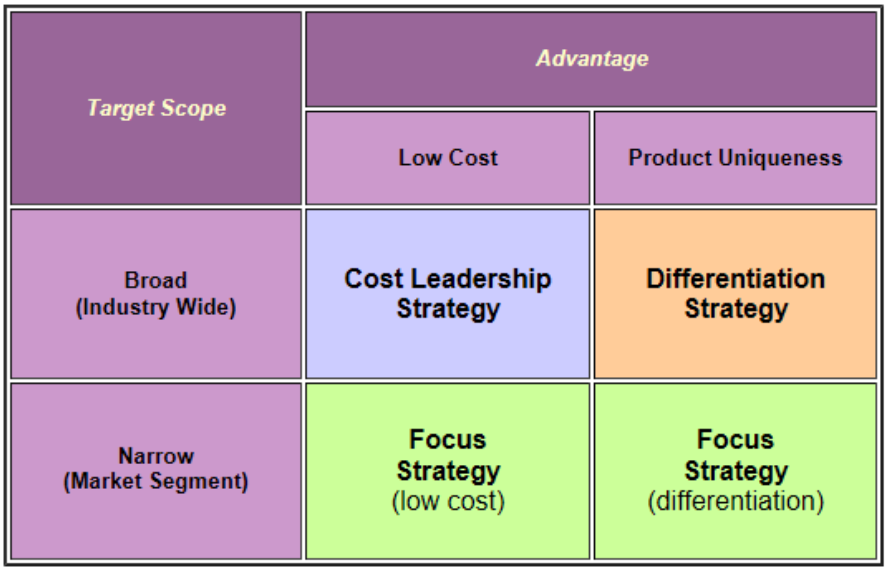

Figure 12 – Porter's Generic Strategies

In order to develop a low cost strategy, firm should offer the lowest price which mainly applies for standard products and requires high volume sales to benefit from economies of scale. This strategy is not appropriate for EMREG since it will offer a customised service with multiple features. In other words, it can enjoy profits using first-mover advantage. On the other hand, complementary offerings such as energy audits may be provided with competitive price to enter the market.

[23] PORTER, M. E. 1985. *Competitive advantage : creating and sustaining superior performance,* New York, London : Free Press ; Collier Macmillan.
[24] Dess.G.G, Lumkin.G.T, Taylor.M.L, (2004). Strategic Management: Creating Competitive Advantages. 2nd ed. Kansas: McGraw-Hill, Ch.12

As it is seen from Figure 12, a niche represents a narrow segment within a market and focus strategy concentrates on that niche segment and attempts to achieve either cost advantage or differentiation. Most researches recommend the niche strategy for new ventures and this is confirmed by numerous empirical studies carried out[25] .Niche strategy with differentiation seems reasonable especially for the entry phase. EMREG can make foothold and make small advances to take competitors market position with its limited resources. If EMREG tries to enter the broad market segment with a differentiating strategy, it is very likely to face aggressive head to head competition from a more powerful competitor.

One of the success factors identified in the literature review is the need for a clear market orientation. A niche strategy will enable EMREG to focus more on specific client needs, values and operating systems, which will provide a better market orientation, and increase its success in getting new customers.

It is understood from the Analysis chapter 4 that, EMREG will be competing within the environmental consultancy industry where 675 companies are competing, particularly in energy and climate change services markets for SMEs. The UK environmental consultancy is highly fragmented, 67% of the market is served by 30 firms achieving revenues in excess of £10 million, and 140 firms achieve sales more than £1mn[26]. This analysis hints us that EMREG has both broad and niche market focus competitors. Therefore, it also supports the argument that EMREG should focus on niche markets without losing to high rivalry at the entry phase.

To further understand the competition, a detailed analysis of energy and climate change industry is done in the competitor analysis (Refer to section 4.3). This analysis gives a simple explanation on where EMREG can find a competitive position in the market. The competitor analysis broadly divides the competitors under four strategic groups as **Boutique1, Boutique2, NFPs and Free Services, Utility companies** and mapped their services offered with weakness and strengths. Since there are several services offered by different strategic

[25] Kauranen.I, Kraus.S., 2009. Strategic management and entrepreneurship: Friends or foes?
[26] Environment Analyst. 2012. *Environment Analyst | Market Intelligence Service 2012 - Global* [Online]. Available: http://environment-analyst.com/global [Accessed 03.08 2012].

groups with different strengths (capabilities and resources), EMREG should definitely offer differentiated value to the clients.

To sum up, considering the uniqueness of this business opportunity, and the need for a better market orientation, a differentiated strategy with narrow focus is chosen as the core business strategy for EMREG. Taking the relevant studies into mentioned above consideration and need for flexibility, some elements of cost strategy can be applied to enter the market i.e. 'open the door'. Target segmentation is done for defining niche markets and differentiating elements are identified from competitor analysis and findings from research data.

In conclusion, following a business strategy for a narrow market segment and offering differentiated services is the best option for EMREG taking both theory and practical evidences into consideration. In later section of business plan, niche markets and differentiated value proposition is presented.

5.3 Customers / Target Segment

Research studies have concluded that a professional analysis of the target market can reduce venture failure rates by up to 60%[27]. EMREG's target market is the SMEs in UK in broadest term. As defined in the business strategy, EMREG will focus on niche markets while creating unmatched value for the clients. It is possible to develop a value preposition that can attract new customers through proper customer segmentation[28] and defining target audiences. Especially for a company with limited resources, segmentation becomes more crucial to allocate resources efficiently and understanding the needs of the clients.

This section first presents the segmentation rationale and then analyses the SMEs market to identify target segments. Demographic based, needs based and geographic based segmentation are used to find out the target markets and build the value preposition and develop entry and growth strategies. It is important to highlight that segmentation is mostly

[27] HILLS, G. E., HULTMAN, C. M. & MILES, M. P. 2008. The Evolution and Development of Entrepreneurial Marketing. *Journal of Small Business Management,* 46**,** 99-112.
[28] BEST, R. J. 2009. *Market-based management : strategies for growing customer value and profitability,* Upper Saddle River, N.J. ; London, Pearson/Prentice Hall.

based on the secondary data collected. Primary data is also investigated and used wherever possible.

Since this is one of the most important parts of the business plan, it would be better to verify the secondary data analysis by experiencing the real-life cases. As it is mentioned in the literature review, testing before launching is critical for the NSD process. It would be helpful to gather customer feedback, test and modify the service offering for any changes necessary before official launch. Initial test can be carried out using its existing client portfolio of EMREG Consulting Ltd. (Refer literature review section 2.6.3) .in line with the literature review on NSD, testing should be carefully designed and analysed as it is difficult to build a mental picture in the customers' minds for a service product, due to the intangibility characteristic of services.

Rationale for Segmentation

EMREG defines their target market as those organisations with an annual gas/electricity/oil spend of between £250K and £750K. This is used as a baseline for the segmentation.
Later in this section it will be shown by data that this baseline can form a strong ground for target segmentation. The rationale for this assumption is:

- There is more likely to be a well-defined energy management structure in the companies that has an energy spending over £750K, therefore PTEM service might not be relevant for those companies
- Companies that have energy spending less than £250K are also not interested with PTEM service since payback will not be attractive

Segmentation process

It is reported that Firm size, energy intensity and competitive position are identified as distinguishing factors while explaining the differences in behaviour and attitude towards policy[29].This segmentation process is based on private sector since the secondary research in

[29] De Groot, H. L. F., Verhoef, E. T., Nijkamp, P. & Tinbergen, I. 1999. *Energy saving by firms : decision-making, barriers and policies,* Amsterdam, Tinbergen Institute.

the analysis chapter 5 indicates that there are substancial government cuts and also only 28 per cent of the total EC market is derived from the public sector.

A two-step elimination process is followed to narrow the total market and find out EMREG's target audience shown in Figure 13. Firstly, a demographic segmentation is performed. BIS[32] data is used to find out the number of enterprises that have estimated energy spending between £250K and £750K. Secondly, within the enterprises sorted above, need based segmentation is carried out and energy intensity measurement is done to identify top niche sectors. Finally, a geographic segmentation is carried out on selected niche sectors to develop entry and growth strategies. This segmentation also helped in formulating the organisational structure. (Refer to section 5.9)

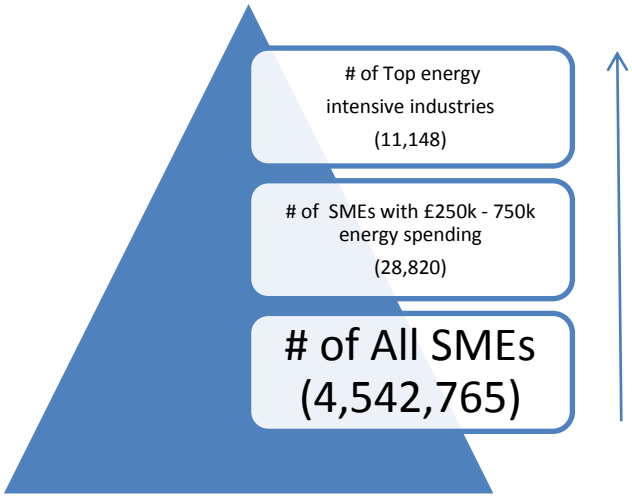

Figure 13 –Downsizing the target market[30]

a. Segmentation by Demographics

Company size is stated as one of the most influential structural factors affecting the implementation of environmental practices[31]. Table 8 shows the first step analysis of EMREG's target market. BIS[32] data provides number of enterprises in each employment

[30] Total number of enterprises only includes private sector enterprises. BIS Business Population Estimates data combines information on registered business and with an estimate number of unregistered business in UK. Public sector and non-for-profit enterprises are not targeted here.
[31] Gonzalez-Benito, J. and Gonzalez-Benito, O. (2006) 'A review of determinant factors of environmental proactivity', *Business Strategy and the Environment*, 15(2), 87-102.
[32] BIS (2011). Business Population Estimates For the UK and the Regions

segment and their corresponding turnover value. From these data, average turnover per enterprise is calculated. Our primary and secondary research shows that companies may not be interested in energy spending if they have energy spending less than 2.5%. A highest 6% in the table refers to the energy spending in energy intensive industries such as manufacturing sector which has on average 6.4 per cent of total operating costs[13]. An average EBITDA margin 10.7 per cent is calculated by using 2135 SMEs operating in manufacturing industry with a number of employees between 10 – 249.[33] Therefore, energy cost of manufacturing industries can be estimated as circa 6% of the total revenue. Based on these assumptions, average energy spending of the SMEs is calculated for the two scenarios.

Employment	# of enterprises	Turnover (£mn)	Average Turnover /enterprise (£mn)	Energy cost %2,5 of rev.	Energy cost %6 of rev.
Zero or 1 employee	3.533.655	230.201	0,07	0,00	0,00
2-4	580.475	183.386	0,32	0,01	0,02
5-9	218.435	192.715	0,88	0,02	0,05
10-19	109.735	175.384	1,60	0,04	0,10
20-49 (2nd)	63.670	285.116	4,48	0,11	0,27
50-99 (1st)	20.280	194.395	9,59	0,24	0,58
100-199 (1st)	8.540	165.508	19,38	0,48	1,16
200-249 (3rd)	1.655	62.551	37,80	0,94	2,27
250-499	3.235	205.960	63,67	1,59	3,82
500 or more	3.085	1.357.342	439,98	11,00	26,40

Table 8 – Segmentation by company size

It is identified that employee number between **50 - 199** can be set as primary target market as highlighted in Table 8 for EMREG since the energy spending of this segment fits into £250K – £750K range. These segments most likely need a formal energy policy and management system that EMREG can target primarily. The secondary target segment is set as the companies that have **20 - 49** employees. Some of the potential clients in this segment may need PTEMs while some of them may only need a standard energy audit due to the low payback and limited budget. The tertiary segment is set as the enterprises that have **200 - 249** employees. These companies most likely already have a formal energy policy and management system due to high energy spending and corporate requirements.

[33] FAME Database, 2012

Primary and secondary survey data also strengthen the selection of the primary target segment. SMEs that employee between 1 to 5 and 51 to 250 are less able to respond to the challenge of carbon reduction and do not actively attempt to attribute costs to the products/service they offer. On the other hand, firms with 5 to 50 employees are 4 times more likely to do. That shows the primary target set above would need much more advisory than the other sections of SMEs.[34]

During a depth-interview, (Appendix C) the managers of a EU funded environmental consultancy organisation based in UoN approved that the demographic segmentation above is valid and logical for this business case. They agreed that employment level is a parameter to differentiate the needs of the organisations and also can be used to find the target customers in the real life.

b. Segmentation by Energy Dependency

The second step analysis is performed according to energy dependency of the industries. The assumption behind this segmentation is that energy intensive industries need much more energy advisory than low energy intensive industries. This assumption is backed up by primary and secondary research.

A Project Officer at EU funded environmental consultancy organisation (Appendix C) highlighted that energy intensity is a good measure to sort companies into sectors, however a careful examination is needed. She added that;

> 'Energy intensive industries may not necessarily be energy inefficient. Their output might be extremely efficient (gave the example of cement manufacturers). Energy intensity is a good measure but you should keep in mind this fact'.

Table 9 demonstrates the top 34 energy intensive industry divisions which consumes above 10 terajoules of energy per £mn turnover. Breakdown of these 34 industries reveals that manufacturing sector becomes the primary target division with 22 sub-sectors out of 34.

[34] EXPERTO CREDO 2009. UK Business Carbon Top3Map

C - Manufacturing: 22/34

H – Transportation and storage: 4/34

E - Water Supply; Sewerage, waste management and remed. Act. : 2/34

D – Electricity, gas, steam and air conditioning supply: 2/34

B – Mining and quarrying: 2/34

A – Agriculture, forestry and fishing: 1/34

Section	Industrial sector	2010
C	Manufacture of coke oven & refined petroleum products	401,838
C	Manufacture of basic Iron & Steel	100,867
H,J	Air transport services	92,640
C	Manufacture of petrochemicals	89,616
C	Paper and paper products	49,470
C	Manufacture of glass, refractory, clay, other porcelain and ceramic products, Stone, & abrasive products	45,937
C	Manufacture of other basic metals & casting	45,851
C	Manufacture of industrial gases and non-nitrogen-based inorganic chemicals	37,650
C	Manufacture of cement, lime, plaster, articles of concrete, cement and plaster	33,132
H,J	Water transport services	32,533
C	Rubber & plastics products	30,436
C	Wood and of products of wood and cork, except furniture; articles of straw and plaiting materials	25,744
C	Textiles	21,443
D,E	Electricity production	21,182
H,J	Buses, coaches, trams and similar public urban transport, Underground, metro other non interurban rail services, Taxis and other renting of private cars with driver, Freight transport by road and removal services, Transport via pipeline	17,867
D,E	Remediation services and other waste management services	17,367
B	Mining of coal and lignite	16,745
C	Manufacture of dairy products	16,589
D,E	Natural water; water treatment and supply services	16,233
C	Manufacture of grain mill products, starches and starch products	16,138
A	Products of agriculture, hunting and related services	16,105
C	Manufacture of other chemical products & man-made fibres	14,936
H,J	Rail transport	14,611
C	Processing and preserving of fish, crustaceans, molluscs, fruit and vegetables	14,137
R,S	Creative, arts and entertainment services	13,792
C	Processing and preserving of meat and production of meat products	13,615
C	Manufacture of prepared animal feeds	13,597
D,E	Manufacture of gas; distribution of gaseous fuels through mains and steam and air conditioning supply	12,141
C	Motor vehicles, trailers and semi-trailers	11,887
C	Manufacture of cleaning & toilet preparations	11,837
C	Manufacture of alcoholic beverages, including spirits, wine, cider, beer and malt	11,082
C	Furniture	10,961
B	Crude petroleum and natural gas	10,826
C	Electrical equipment	10,133

Table 9 – Energy intensity by Industry (Terajoules / £mn turnover)

After determining the top 34 industries, it is broke down into demographic segments to find out the total number of potential organisations in each segment as shown in Table 10. This leads to;

3,950 companies in primary segment of 50-199 employees

6,908 companies in secondary segment of 20-49 employees

290 companies in tertiary segment of 200-249 employees

Industry Divisions	20-49	50-99	100-199	200-249	
19 Manufacture of coke and refined petroleum products	10	10	5	0	
24 Manufacture of basic metals	205	100	50	10	
51 Air transport	40	*	*	5	
20 Manufacture of chemicals and chemical products	330	175	80	30	
17 Manufacture of paper and paper products	185	110	60	15	
23 Manufacture of other non-metallic mineral products	320	125	65	15	
50 Water transport	60	*	*	0	
22 Manufacture of rubber and plastic products	785	360	155	40	
16 Manufacture of wood and of products of wood and cork, except furniture: manufacture of articles of straw and plaiting materials	13	9	6	*	
13 Manufacture of textiles	335	100	55	10	
35 Electricity, gas, steam and air conditioning supply	40	25	15	0	
49 Land transport and transport via pipelines	1.615	530	145	30	
39 Remediation activities and other waste management services	10	*	5	0	
05 Mining of coal and lignite	0	0	5	0	
10 Manufacture of food products	715	355	210	45	
36 Water collection, treatment and supply	10	10	5	5	
01 Crop and animal production, hunting and related service activities	880	235	70	15	
90 Creative, arts and entertainment activities	160	55	25	0	
29 Manufacture of motor vehicles, trailers and semi-trailers	260	145	90	25	
11 Manufacture of beverages	60	25	20	5	
31 Manufacture of furniture	430	150	80	20	
06 Extraction of crude petroleum and natural gas	10	5	0	5	
27 Manufacture of electrical equipment	435	175	105	15	
Total number of enterprises	**6908**	**2699**	**1251**	**290**	**11148**

Table 10 – Number of enterprises based on energy intensity

Geographical Segmentation

In order to assist the entry and growth strategy, geographical segmentation is also carried out to prioritise the target locations with respect to target market segmented in the previous sections.

This analysis will be fed into the growth strategy and cost aspects of the financial modelling, while determining the number of associates needed.

The segmentation analysis shown below is carried out using statistics published by BIS[32]. The information identified is represented in the form of pie charts to highlight key geographic segments according to concentration of SMEs and energy intensive sectors.

Whole UK

It is seen from the Figure 14 that London, South East and East of England regions are the top three regions in terms of the total number of enterprises.

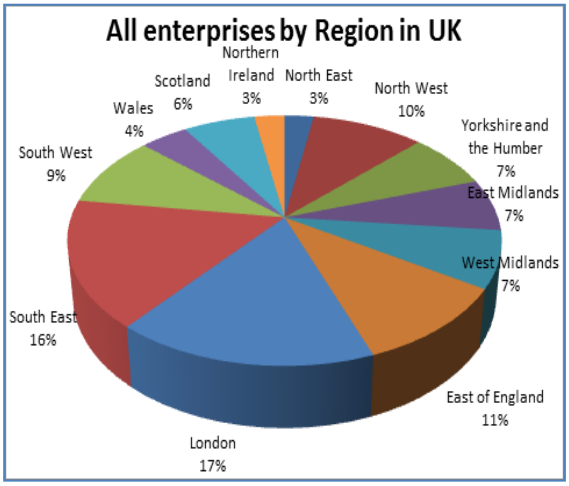

Figure 14 – All Enterprises by Region in UK

Niche sector analysis

Manufacturing: It can be interpreted that manufacturing in England is distributed more or less equal to the regions. South East, North West and North East are the leading manufacturing regions followed closely by midlands regions. The details are shown in Figure 15.

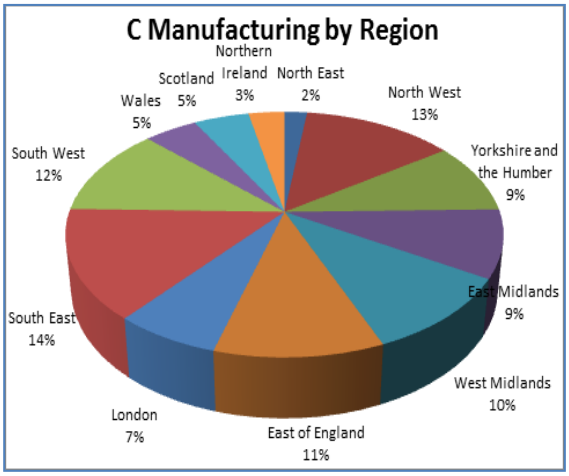

Figure 15 – Manufacturing by Region

Transportation and storage: London, South East and North West regions are top three regions, as shown in Figure 16.

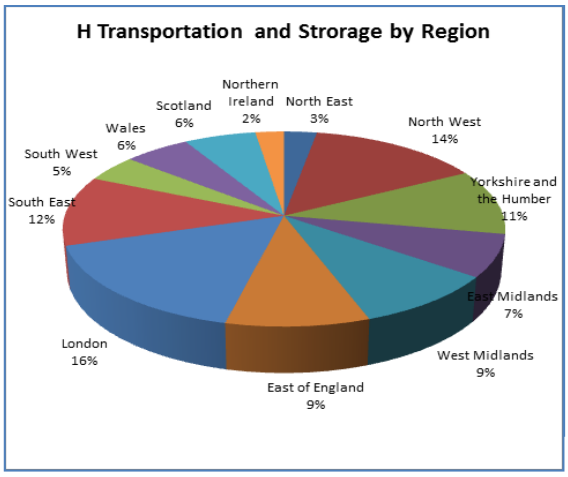

Figure 16 – Transportation and Storage by Region

Agriculture, Forestry and Fishing: South West region is the leader, including 17% of the industry. Then, Scotland, Northern Ireland, Wales and Midlands regions are in the list. This is shown graphically in the Figure 17.

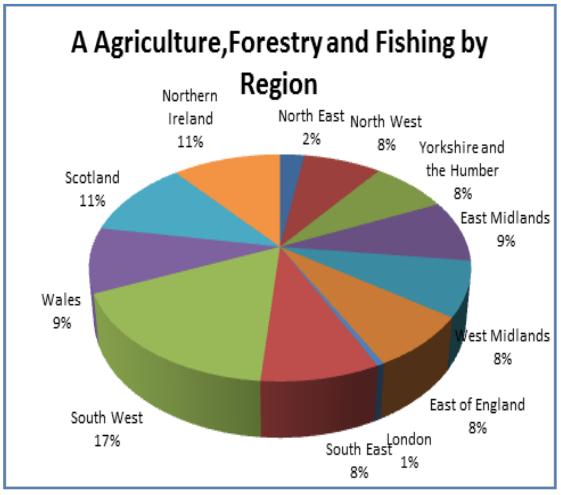

Figure 17 – Agriculture, Forestry and Fishing by Region

Mining and Quarrying; Electricity, Gas and Air Con. Supply; Water Supply; Waste Management and Remed. Act: These industries are mainly located in Scotland, London, East, North West and East Midlands Regions.(see Figure 18)

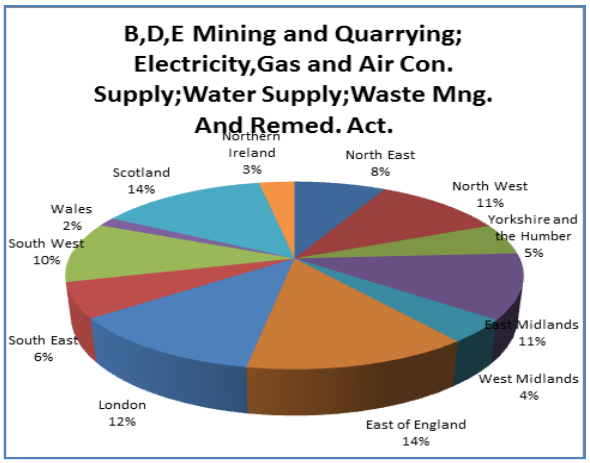

Figure 18 –Mining and Quarrying

SEGMENTATION SUMMARY

Following the business strategy, niche markets are identified by proper segmentation tools and using relevant analysis from primary and secondary data. Employees with 50 – 199 is identified as primary, 20 – 49 set as secondary and 200 – 250 set as tertiary target segments. Within these segments, a further breakdown is carried out according to the energy intensity. The analysis obtained 3,950 companies in primary segment, 290 companies in secondary segment and 6,908 companies in tertiary segment. The segmentation also identifies the niche sectors and their relevant subsectors. South East and North West regions are identified as the primary regions for manufacturing, transportation and storage industries.

The next section explains the service lines and value proposition to the defined target segments using customer intelligence acquired by primary and secondary research.

5.4 Service Lines

This section of the report will discuss in detail the service lines offered and the features associated. These service lines (See
Figure 19) are developed with reference to the initial analysis and business strategies undertaken.

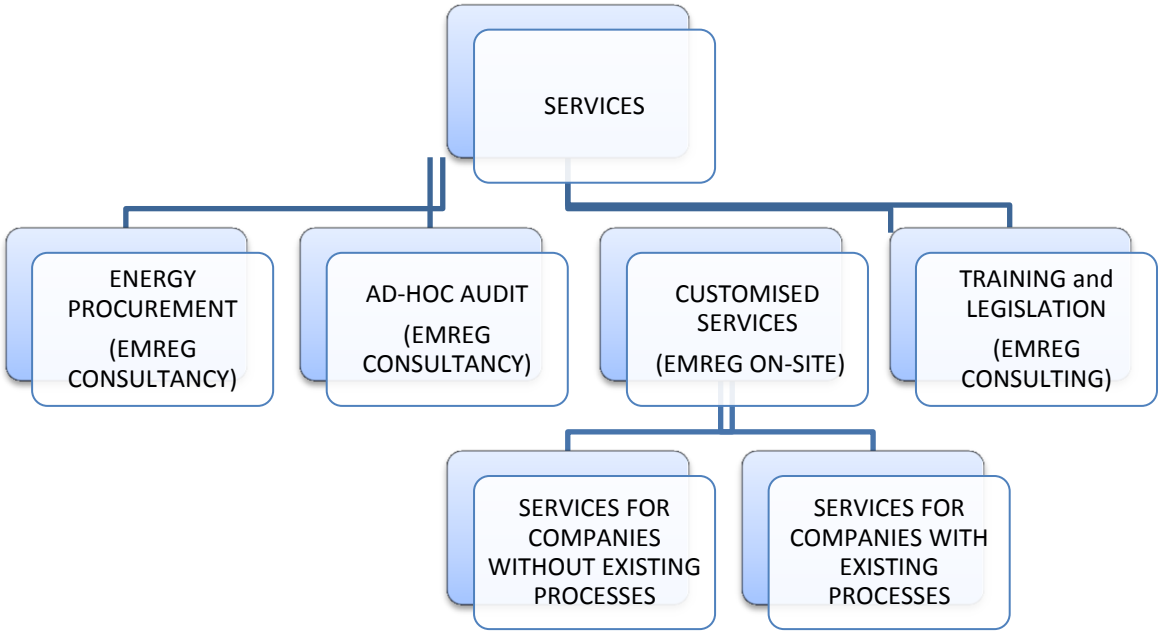

Figure 19 – Service portfolio of EMREG

Figure 19 – Service portfolio of EMREG categorises energy management services under ENERGY procurement, ad-hoc audits training & legislations and customised services. Service categorization is designed according to perceived needs of the target segments in order to satisfy customers and serve more efficiently and effectively.

Energy Procurement services entail energy managers identifying areas of cost savings. This includes identifying cheaper options for energy purchases, maintaining a watch on price and other developments in energy markets by checking energy supply invoices and obtaining refunds. This service offering will be provided by EMREG Consultancy since there is no long-term support needed. This service will be relevant to companies who just want to control and decrease their bills through the purchasing. All of three target segments may be

interested, particularly first and second target segments which have no dedicated role in their organisation.

Similarly, the **ad-hoc audits** product will be provided by EMREG consultancy in making recommendations for clients who require standard assessment of their buildings and processes through a thorough auditing process and identifying potential energy saving areas. Assuming that 200 - 250 employee segments most probably already purchased these audits, this service will be relevant to first and second target clients. It is also important to highlight that energy audits are starting point for PTEM service to understand the client needs and propose relevant service.

Customised package services will be the primary focus for EMREG On-site, as this will include various options for different organisational sectors to get long-term support of PTEMs. This service group is further segmented according to clients who have existing processes in place and those who do not. The Rationale behind this breakdown is the potential differences between the client structures and savings made.

A manager of an organisation in the UoN at Environmental Technology Centre and a managing director of a local energy business (Appendix C) highlighted the fact that there may be potential conflict between the PTEMs and employees/managers in the companies. They explained that employees can feel offended and try to put barriers if the recommendations coming from PTEM are reflecting their (employees/managers) inefficiencies. Regarding savings, companies without existing energy management processes are expected to have much more savings potential.

The information found in the interviews (Appendix C) gives details of the various services that can be offered by energy managers and subsequent categorization under the above categorised service line. Major services are behavioural change programmes, ISO accreditations, monitoring & targeting, process and operational energy management consultancy.

EMREG will focus on providing customised service packages to companies without a formalised energy management process according to client needs. This is decision is supported by our primary research evidences (Appendix C). This service is more relevant to our primary target customers, i.e. companies with employees between 50-199. In the case of serving companies that have existing processes, there can still be the need for long-term support by PTEMs but with a different business model. For instance, companies with ISO 14001 may need behavioural change programmes which may take some time to implement and may need continuous support. Details of the service model will be explained in the pricing section later in this report. In addition, it should be noted that customised services for companies without existing processes would be more relevant to companies with employees between 200-250.

The final service which is **training & legislations**, will address the needs of the clients who want to be informed about the energy management as well as energy regulations. According to the BIS[36] regulations act as a limitation to implementation of EMS due to time, effort, cost for compliance, paperwork and administrative purpose and uncertainty. In reference to Industry Trends section 4.1, ECs also value legislation as a key opportunity for growth. This service line includes general energy management trainings for the staff, legislation trainings and mid-term support for adopting processes according to the required legislations, and mainly targets primary and secondary segments.

Depending on the specific needs of the clients, service will be delivered by qualified energy managers in that specific field. The energy managers or associates will be recruited from various industry backgrounds to solve problems that need specialist knowledge.

A Project Officer at EU funded environmental consultancy organisation (Appendix C) highlighted a fact based on her experiences that

> 'It is important to talk the same language with the business. For example, if the client manufactures cake, the consultant better have a background or knowledge on that process or industry'.

This sums up the range of services with different features designed to be offered for the targeted market segments. It is very critical to understand that the success of designed service model will depend upon the effective delivery of services with good quality and in a short span of time. It should be noted that except for customized services, other services will be delivered by EMREG Consulting not EMREG On-Site and is reflected in the financials accordingly. To address the effective delivery aspect, a central controlling process is embedded within the organization structure. (Refer to section 5.9)

5.5 Value Proposition / Differentiation

After defining business strategy, target segment and services, this section is going to first describe the reasons why the customers prefer EMREG instead of its competitors. Value statement and differentiation are formed by feeding NSD, primary and secondary research through a structural approach.

The value proposition underlines the measurable benefits of a product or service, illustrate the return on investment and other positive outcomes of choosing a particular service provider over its competitors[35]. Therefore, it is important to understand customer needs, their buying behaviour and competitor offers to design an easily understandable value statement by target markets.

The value preposition will be built by using customer and competitor intelligence data in the following section.

Customer Intelligence

In depth examination of customer situation can be used to build the value proposition which is the best approach for market oriented offering[35]. Primary in-depth interviews and secondary data are combined to have the approximate understanding of the clients and

[35] *Hlava, M. M. K. & Camlek, V. 2010. How To Spot A Real Value Proposition. Information Services & Use, 30, 119-123.*

bridge the gap with PTEM offering. Value offered should also capture the relevant requirements to minimise the barriers and adapt to the drivers emphasized in section 4.4.

There are certain important themes that came up through the primary and secondary research. These themes reflect the factors to implement EnMS such as **funding, resources and culture**.

Funding

Accessing finance is one of the major issues that SMEs experience difficulty in (refer to section 4.5 Barriers). The current economic climate particularly increased the pressure on the banks to take less risky decisions. It is reported that 51 per cent of SME employers experience difficulties in accessing finance[36]. In addition, 25 per cent of small businesses stated financial access as one of their major weaknesses in their businesses.

It is reported that particularly in highly competitive market conditions, return on investment is often considered too slow or too small to justify the upfront expenditure[37]. It is mentioned in section 5.5 that, uncertainty in ROI is one of the major barriers for SMEs.

Primary research also revealed similar outcomes. An operation director of a multi-million turnover manufacturing company (Appendix C) during the interview said that;

> 'It will be important how EMREG partners with whoever is offering the finance for the projects. Since companies need funds to implement the energy efficient systems and with no cash on hand they might not even do it'.

Resources

Cost reduction or savings are the most important business agenda items for SMEs. 93 per cent of firms stated that they are interested in understanding the assistance regarding operational cost reduction[36].

[36] BIS 2011. Business Population Estimates For the UK and the Regions
[37] Middlesex University. 2009. *smes in a low carbon economy*

Money and management time are the biggest issues to invest in energy efficiency (refer to section 4.5). In relation to this data, sales and cash flow are seen as the biggest risk for SMEs.[38] In addition, SMEs are likely to implement EnMS for new sales and better client relationship to have more resources.

Lack of internal knowledge is also seen as a barrier to progress on some energy projects by SMEs[39].

Culture

SMEs have a different structure compared to large corporations and require a different approach. SMEs are more informal, spontaneous and practical/experiential and they value tangible outcomes which have proven effects on their bottom line. They prefer more conversational style of relationship rather than formal. They are sensitive to the disclosure of their information to competitors and value transparency and openness in their relationships (Refer to Success Factors, Section 2.6.4).

There is also misperception of environmental management. Owner-managers of SMEs perceive environmental management as costly and 'win-lose' rather than 'win-win'. (Refer to barriers, section 4.5)

SMEs are also often closely attached to their local communities and owner behaviour tends to influence the firm[40]. Local network and stakeholder relationship are often critical to the firm's success.

Data from the interviews show that employee engagement is one of the most important success factors for energy efficiency projects as well as senior buy-in. A Project Officer at EU funded environmental consultancy organisation (Appendix C) said that;

[38] NPOWER 2011. Business Energy Index 2011.
[39] EEF 2012. Managing Green and Growth:A survey of Manufacturers. EEF (The manufacturer's oragnisation).
[40] Middlesex University. 2009. *SMEs in a Low Carbon Economy*

'It is important to work with them not for them. You should communicate this approach. Solution may come from outside, but issue always has to come from shop floor'

Customer intelligence provided key understanding for value proposition and factors identified as funding, resources and culture. In line with the business strategy, differentiating among competition is critical to survive in the market. The, following section provides competition intelligence.

Competition Intelligence

There are different data based on the advisory sources preferred by SMEs. Recent survey done by Npower[8] reveals that SMEs' first choice for receiving advice is their energy suppliers, then NGOs, consultants and equipment suppliers as shown in Figure 20.

Response	SMEs (6)	SMEs (7)	SMEs (8)	MEUs (6)	MEUs (7)	MEUs (8)	All (6)	All (7)	All (8)
Energy consultants	4.1	4.8	4.7	3.5	5.2	5.5	3.9	4.9	4.3
Energy suppliers	4.9	3.7	4.4	4.5	6.0	5.4	4.7	4.4	4.7
Equipment suppliers	5.0	4.1	3.9	4.8	5.8	5.4	4.9	4.7	4.4
NGOs	5.3	4.2	4.3	5.8	7.4	6.4	5.5	5.2	5.0

Figure 20 – SMEs preference on business advisory, scale: out of 54

Another survey done by an independent consultancy company, Experto Crede[34], shows that 73 per cent of the SME respondents seek assistance from their trade association, 22 per cent from internet and 5 per cent from the Energy Saving Trust.

Based on the competitor analysis (Section 4.3), there is no competitor solely focused on part time energy management concept in their services. Although Boutique1 and Boutique 2 companies offer similar services, emphasis on PTEM concept seems to be missing in their offerings.

Competition intelligence indicates that energy consultants are not preferred alternative for SMEs. On the other hand, this may also indicate that there is a gap of service offering from

consultants to SMEs. Also, an interviewee (Appendix C) mentioned that although there are so many energy consultancies, SMEs still have energy issues and inefficiencies.

Value Proposition Statement

There are three types of value proposition shown in the Figure 21 below; all benefits, favourable points of difference, and resonating focus[41]. Regarding the intense competition and variances in target segments, favourable points of difference is relevant for this case. Therefore, the proposition should clearly demonstrate why EMREG can be preferred instead of nearest competitors. Based on the customer and competition intelligence analysis above, the following value proposition is defined for EMREG;

'EMREG offers a guaranteed win – win energy management service. EMREG provides best practices, flexibility and result orientation in energy management while being a local partner'

VALUE PROPOSITION:	ALL BENEFITS	FAVORABLE POINTS OF DIFFERENCE	RESONATING FOCUS
Consists of:	All benefits customers receive from a market offering	All favorable points of difference a market offering has relative to the next best alternative	The one or two points of difference (and, perhaps, a point of parity) whose improvement will deliver the greatest value to the customer for the foreseeable future
Answers the customer question:	"Why should our firm purchase your offering?"	"Why should our firm purchase your offering instead of your competitor's?"	"What is *most* worthwhile for our firm to keep in mind about your offering?"
Requires:	Knowledge of own market offering	Knowledge of own market offering and next best alternative	Knowledge of how own market offering delivers superior value to customers, compared with next best alternative
Has the potential pitfall:	Benefit assertion	Value presumption	Requires customer value research

Figure 21- Value Proposition Types[48]

[41] ANDERSON, J. C., NARUS, J. A. & VAN ROSSUM, W. 2006. Customer Value Propositions in Business Markets. *Harvard Business Review,* 84**,** 90-99.

Differentiation (Unique Selling Point)

Value statement is designed to summarize the key aspects of the values, give clear reasons to the clients why they should choose EMREG not the competitors and increase the acceptance of service. Differentiation points are now articulated.

As we have seen in the previous sections, EMREG should distinguish from the nearest competitors by creating value for the client. Differentiation is achieved when consumers perceive that a service differs on any characteristics, including price. The more service is differentiated, the more price inelasticity occurs[42].

As stated in the literature review (Section 2.4), PTEM service cannot be classified as a pure service. Taking these into account, differentiation strategy will be defined. Also, strategies that solely focus on customer value are not advantageous if competitors imitate quickly[42]. Therefore, certain tactics on how to increase barriers for imitation are included.

Price

Due to the intangible nature of the PTEM service, customers are at risk of buying an outcome which they cannot fully assess prior to purchase. This is also reflected by many primary research participants (Appendix C) that risk should be minimised for SMEs to enter the energy services market. In addition, there is a common perception that consultancies generally charge high fees but deliver what clients already know. Furthermore, customer intelligence acknowledges that cost and funding are the major issue for SMEs.

A managing director of an SME (Appendix C) commented as;

> 'It has to be a shared risk. Company also should get some pain to involve in the process (commitment). But also some risk should be taken by consultancy'.

[42] FISHER, R. J. 1991. DURABLE DIFFERENTIATION STRATEGIES FOR SERVICES. *Journal of Services Marketing,* 5**,** 19.

A HSE manager (Appendix C) in a multinational abrasive manufacturing company commented that self-funding is essential for this business.

Therefore, there is an opportunity to create a unique selling point. EMREG should engage in services that pose less constraint financially to SMEs whilst simultaneously meeting the time constraint. The model is designed as risk-sharing or saving sharing model which will be articulated in the marketing strategy. This will also address the uncertainty in ROI barrier explained in section 4.5. This is also in line with the claim of guaranteed win – win value. It should be noted that this model is applicable for customers who do not have existing energy processes hence have high energy saving potentials.

Delivery Time

Differentiation in delivery time will address one of the most important problems of SMEs. PTEM concept itself is already addressing the lack of time resource of SMEs. Since there is limited number of staff, an energy implementation will require either a dedicated role or increasing the work load of the staff. Employing new staff usually is not an option for SMEs due to limited cash resources and increasing work load will not be efficient. Therefore, part time resource will address the delivery time issue.

In addition, energy managers will be chosen from the industry backgrounds relevant to the target customers. This familiarity will increase the relationship building and speed of the final delivery.

Also, saving sharing model will eliminate the concerns of the SMEs about quick return on investment i.e. payback. Since they will not pay a significant upfront cost, they will not be conscious about the payback period.

Image

Due to perceived quality that customers associate with credibility as indicated in NSD process (Section 2.5), EMREG is trying to construct dynamic and differentiated marketing campaign. Image differentiation is currently on-going with a B2B marketing campaign. This study includes;

- Messaging
- New brand (visual identity)
- Logo
- Font/colour palette
- Web home page
- Example stationery
- Example brochure front cover

Therefore, image differentiation is not included in this report. However, the following section is dedicated to the marketing strategy which includes appropriate tactics and descriptions in order to generate sales, growth and market awareness.

Tactics against imitation[42]

It is possible to enjoy high margins by differentiated positioning until competitive imitation takes place. Although it is pretty difficult to prohibit imitation for service businesses, some tactics can be applied to increase barriers. These are;

- Minimising the staff turnover, developing close client relationship
- Hire employees who have specialised training and skills
- Specialise in a narrow service mix in order to capture learning curve effects
- Promoting long-term relationships through buyer-seller contracts that penalise switching or reward penalty
- Providing warranties to reduce the financial risk with poor service quality and lessen the buyer's need to evaluate the service
- Associating the service with tangible products

5.6 Marketing Strategy

This section of the report presents the overall marketing strategy, pricing, promotion and sales tactics. These elements integrate business strategy and incorporate the value proposition defined. Based on these elements, EMREG will capture market share and grow its business in current competitive energy services market.

Overall Marketing Strategy

Marketing is widely considered as the key to survival, development and success of small or new ventures. The overall importance of marketing for the success of new ventures is rated as 6.7 on a scale of 7.0 by venture capitalists.

The concept of PTEM is designed as a differentiated new service of a new business. There are certain characteristics of new ventures that play an important role in defining marketing strategy. These are **small size, newness, uncertainty and turbulence**.

Small size, EMREG faces the liability of smallness, i.e. it has limited resources (financial and human), limited market power and a small or no customer base[43].Resource scarcity also demands a *high degree of effectiveness and efficiency* in the marketing efforts of young companies[43]. For this reason, marketing may be performed in a relatively unsophisticated way and might have to be executed with limited resources. On the other hand, an important advantage over larger firms is that EMREG can be more flexible with direct and effective communication to make critical decision making faster.

*Newness, N*ew ventures are *unknown entities* to potential customers and other parties, which often translate into a *lack of trust* in their abilities and offerings[43], hence a primary task for EMREG will be to build up trust and to win their first customers.

[43] Gruber.M., 2004. Marketing In new ventures: Theory and Empirical Evidence. Schmalenbach Business Review, Vol. 56, 166-199,

Uncertainty and turbulence, Since the market data is restricted and there is limited information on the nature and level of demand, critical decisions in marketing (e.g., client criteria for choice, quality/cost trade-offs) must be based on vague predictions, which leads to a higher level of trial-and-error in marketing that emerging firms are hardly able to afford[43]. This poses a significant challenge for EMREG to select its marketing strategy and achieve success in market.

Taking these characteristics of new firms, traditional 7P (product, place, price, promotion, people, process and physical evidence) model is used. Since EMREG's service is already defined and there is no certain place for delivering service, focus will be on pricing, people, promotion, process (sales tactics) which will be effective in first place to enter the target markets defined in the earlier part of the business plan.

Pricing

The right pricing of PTEM's service offered by EMREG is very critical, as it will determine how many customers will be interested to use this service and how fast it will be able to capture the target market.

The differentiation point on pricing, pricing strategy below covers tactical elements.

Pricing Strategy, Although PTEM service is aimed at creating monetary value to the clients, there are also other intangible values generated. Developing corporate image and acquiring new businesses are the other important values for the clients referring to drivers section in 4.4. As mentioned in the characteristics of the small businesses, EMREG is unknown to its clients which forces EMREG to build its pricing mainly on tangible value which is cost saving. Saving sharing model will also enable EMREG penetrate more easily into market to build its reputation through word of mouth. In order to eliminate the initial financial burden (cost of energy managers) on EMREG, a certain per cent of the service will be charged upfront to the client and quarterly/half yearly reviews will be performed to calculate yearly savings which will secure cash flow. Details are given in the financial analysis.

As it is stated in the value statement, EMREG will be flexible and offer customized solutions for the target market needs. The table below presents the overview of how pricing is designed for each target segment. (See Table 11 **– Pricing and Target Segments**)

Target Market Segment	Characteristic Of Segment	Main Service category Offered	Pricing Strategy adopted
Primary	Manufacturers with 50-199 employees	Customised for customer without existing processes	Saving Sharing
Secondary	Manufacturers with 20-49 employees	Ad-hoc audits, trainings & legislations	Hourly
Tertiary	Manufacturers with 200-249 employees	Customised for customer with existing processes	Hourly

Table 11 – Pricing and Target Segments

Promotion

EMREG's first sales will be generated through interaction with customers during personal selling and relationship marketing activities. Such interactions are enhanced by word-of mouth marketing and are essentials for generating referrals. Personal networks can play an important role in getting the first customers[44]. The use of personal networks may be both an effective and cost-efficient way to address customers.

The Table 12 below gives various options to new ventures in developing promotional activities. For instance, EMREG may wish to build its brand image by mixture of guerrilla and buzz marketing techniques.

[44] Tyebjee, T.T., Bruno, A.V. and McIntyre, S.H. (1983) 'Growing ventures can anticipate marketing stages', Harvard Business Review, Vol. 61, No. 1, pp.62-66.

Form	Main Characteristics
Guerilla Marketing	**Innovative and effective communication techniques, networking, low cost**
Buzz Marketing	**Through recommendations, personal networks by creating excitement, infatuations and enthusiasm**
Viral Marketing	**Similar to buzz marketing, but more Internet-oriented**

Table 12– Promotional techniques for new ventures[45]

Process (Sales Tactics)

By looking at the PTEM's proposition and after discussions with EMREG, sales managers will go in the market and use their skills and knowledge to generate business for EMREG. Based on the customer requirements, EMREG can deliver the service through its sister companies. The commencement of the business will be carried out through word-of-mouth and industry reference. Therefore, a Salesmen Director is sufficient to start with and then slowly as the business grows, it can add people to the sales force.

For an effective and strong entrance to the market, gaining reference customers from each target niche sector is an important tactical action. Identifying these customers from each sector such as manufacturing, transportation and water supply (section 5.3) and offering competitive pricing at the entry stage will provide a benchmark for other prospects.

[45] Morris, M.H., Schindehutte, M. and LaForge, R.W. (2002) 'Entrepreneurial marketing: A construct for integrating emerging entrepreneurship and marketing perspectives', Journal of Marketing Theory & Practice, Vol. 10,No. 4, pp.1-19

Process Steps

- **Identifying prospective customers**[46] - EMREG's sales representative should target primary segment to identify prospective customers at first place and maintain relationships with qualified prospects. Primary target customers are mainly manufacturers. Therefore, salesmen should take advantage of relevant channels like company web sites, advertising, webinars, tradeshows, e-newsletters and email campaigns.

- **Gaining prospective customers' interest**[46] **–** Sales team need to communicate with the prospective customers regarding the values defined in section 5.5 how its service is better than other options out in market, clear explanation of working of service. At this stage, sharing customer references can prove to be powerful in interesting the clients.

  Customized presentations and ROI tools can be used to explain the benefits and differentiating the service offered by EMREG. A small demonstration can be helpful in showing how the service will be carried out such as flash or slide ware demos. Customer's references can be shared by using press releases that has customer quotes, case studies of existing customer's experience and using quotes from other relevant websites.

The two-stage sales processes are broadly very crucial in generating sales. If the above processes are not in place, and the sales team adequately trained in sales tactics, EMREG will face difficulties in generating clients.

People

A right selection of sales team is very crucial in order to gain completive advantage and generate fast business. Referring to section 2.6.2 Front Line Expertise, the quality of the associates (human capital) becomes very essential for the success of this new service. Energy management is a specific field, hence people needed to carry out sales should be highly

[46] LODISH, L. M., MORGAN, H. L. & ARCHAMBEAU, S. 2007. *Marketing that works : how entrepreneurial marketing can add sustainable value to any sized company,* Upper Saddle River, N.J., Wharton School Pub.(pg.22)

professional, good knowledge about the business with good communication and relationship management skills[46].

The energy manager needs to possess some set of skills in order to deliver the first class service. These skills identified from the primary and secondary research.

The Business Owner of an energy management service company (Appendix C) indicated from his experiences that energy managers should have a proven reputation to be more easily accepted by the customers. This can be an accreditation or certification taken by well-known bodies such as Energy Institute.

The Project Officer at Environmental Technology Centre (Appendix C) who previously works as an energy manager in a consultancy mentioned that;

> 'It is important to talk the same language with the business. For example, if the client manufactures cake, the consultant better have a background or knowledge on that process or industry'.

In addition, PTEM should have other skills and qualifications to execute the energy management. These are:[47]

- Spotting opportunities for energy saving as well as other income
- Streams and identifying options for quick solutions
- In-depth knowledge of energy regulations in order to make justifiable recommendations
- Should be influential in shaping the attitudes of people throughout the organization towards energy management and ensuring adoption of energy saving processes
- Should have the ability to prioritize and execute different activities within energy management
- Should carry out effective communication to embed clarity in processes
- Should have adequate analytical skills in order to provide useful interpretations to statistical findings and to make relevant use in achieving energy efficiency

[47] Association of Graduate Careers Advisory Service, 2010

5.6.1 Service Warranty

Unless the value (most value propositions make claims of saving and benefits to the customers) claimed is backed by solid demonstration and execution, a customer manager will likely dismiss it as marketing puffery[48].

As it is defined in the value statement, EMREG provides a unique value to the SMEs by stating 'guaranteed win-win'. This commitment needs a warranty policy to make the value more tangible and reliable to the client.

Contractual agreement will be done with the client after audit. It should be specifically mentioned that in case of expected savings not realized, the final instalment will be adjusted accordingly. (See section Economics of business, 5.7 for details)

There are some risks to provide this warranty such as loss in cash flows and losing credibility in the market. On the other hand, it will be unmatched value and differentiating point for EMREG. The policy will also push EMREG to deliver better service in time.

5.7 The economics of the business

Previous sections defined the key strategies to win in the market. The economic and financial characteristics must support the fundamental attractiveness of the opportunity[49]. In this section, the transformation of the strategies into the financial projections will be presented. Critical figures such as break even, profit margin, growth rates, the cash needed before break even and operational expenses are included for two years. The first year is starting from July'12 and second year ends on June'14. Excel snapshots and relevant charts are used to for demonstration of those figures. Two-year detailed monthly cash flow projections is chosen as a technique rather than yearly three or more years projections. (See

[48] Best J. C., NARUS, J. A. & VAN ROSSUM, W. 2006. Customer Value Propositions in Business Markets. *Harvard Business Review,* 84**,** 90-99.

[49] TIMMONS, J. A. & SPINELLI, S. 2009. *New venture creation : entrepreneurship for the 21st century,* Boston, [Mass.] ; London, McGraw-Hill.

Appendix G for full 24 month cash flow) .The reason is that cash flow and cash are the king and queen of entrepreneurial finance[49].

First of all, although economics should state a reasonable outcome for investors to spend money, it should be noted that financial projections for start-ups require many assumptions due to the several uncertainties. Therefore, these projections are based on few critical assumptions which can really affect the end result. Key assumptions will be presented where necessary and a critical evaluation of these assumptions will be done at the end.

5.7.1 Revenue Generation

Since this business plan is built to exploit the opportunities for PTEM, financials represents solely the sales of customised services in the service line (See section 5.4). The additional sales of the other services are considered as account for EMREG Consulting Ltd. In addition, the audit service which should be done prior to PTEM service is not reflected in EMREG ON-SITE financials.

Revenue generation model is based on saving sharing model as described in pricing section. Data from a interviews show that there should be an upfront cost to engage the company to the energy management process. Otherwise, the top management and employees may not feel the obligation to execute the necessary actions. Therefore, after initial contract agreements with client and audit, there will a charge of 33 per cent of the total fee which is 25 per cent of the total savings forecasted. The other two equal instalments will be charged quarterly i.e. third month and six month. Although all savings will not be realized at that time, performance indicators and baseline will be used to calculate future possible savings for the next two years. Before the last instalment, the savings will be compared with the estimated savings. If the customer's saving is less than estimation, the difference will be charged. If the savings are more than estimated, there will be no extra charge to the customer. There is an illustration below shows this model.

Customer Energy bill = 1000K

Savings calculated = 100K

EMREG's fee (25%) = 30K

Upfront charge= 10K

Second instalment=10K

Third instalments are calculated for three different scenarios below.

Let's assume that customer saves/will save 120K >> third instalment = 10K

Let's assume that customer saves/will save 100K >> third instalment = 10K

Let's assume that customer saves /will save 80 >> third instalment = 80*0.25*0.33 = 6.6 K

Referring to the target segmentation (section 5.3), the average energy bill of the primary segment is calculated as 530K. As it is mentioned in the industry analysis (section 4.1), energy inefficiencies for SMEs can be improved up to 20 per cent. Therefore, it is assumed that PTEM service save in average 10% of the total energy spending of the client from the primary segment.

Based on the rationales above, first and second year turnovers are forecasted as £78,705 and £808,913 (see Table 13 – 2 year P&L projection) respectively. It should be noted that first year sales starts 8th month of the year, Feb'13. Growth is generated by two new customers per month added by each salesman. In the second year, four new salesmen for four regions will be hired as explained in the organisation section.

5.7.2 Costs

The main cost drivers and forecasts for EMREG ON-SITE are summarized in the (Table 13 – 2 year P&L projection and Figure 22) below. The biggest cost item will be the salaries of the staff. Except salesmen and energy manager salaries, all other cost items are transformed from EMREG projections. EMREGs managers plan to outsource associates and hire 1 sales manager YR1 and 1 sales professional YR2. In this business model, there will be sales managers and regional sales managers to build the relationship and expand the business more easily. In addition, technical delivery will be done by regional energy managers coordinated by technical manager. (EMREG considered this technical manager as John Mulholland who is a well-known experienced professional in energy industry).

Since the staff will be recruited rather than outsource, sales generation will become critical to secure cash flow and pay the fixed costs. On the other hand, considering that the first energy manager will be the technical manager and first regional technical manager is planned to be hired in April'13, there will be no heavy burden of this strategy in the first year. As it is stated in the overall schedule (Section 5.8), EMREG should continuously develop the offer and may consider outsourcing looking at the revenue generation.

Since the first invoice is planned to be in Feb'13, all the upfront costs are considered as investment cost (£52,400) and is not included in the P&L table below. Salesmen bonuses are included in the other expenses. Management fee includes the distributed cost from EMREG Consulting and employment cost is national insurance cost which 11,5 per cent of the staff salary cost.

Annual Salaries of the staff (not including bonuses)

Sales Manager: £60,000

Technical Manager: £60,000

RSM and REM : £48,000

Table 13 – 2 year P&L projection

	Year 1	Year 2
Revenue	***£78,705***	***£808,913***
Operating expenses		
B2B Marketing(Earnest)	***£5,000***	***£14,400***
Ongoing Marketing	***£16,000***	***£12,000***
Employment cost	***£3,450***	***£34,500***
Travel expenses	***£6,000***	***£60,000***
Other expenses	***£6,000***	***£60,000***
Salesmen salaries (SM+TM+RSMs)*	***£30,000***	***£192,000***
Admin support	***£5,000***	***£24,000***
Energy manager salaries (REM)*	***£0***	***£108,000***
Management fee	***£13.666***	***£78,000***
Total operation cost	***£85,116***	***£582,900***

SM:Sales Mng, TM:Tech. Manager, RSM: Regional Sales Manager, REM: Regional Energy Managers

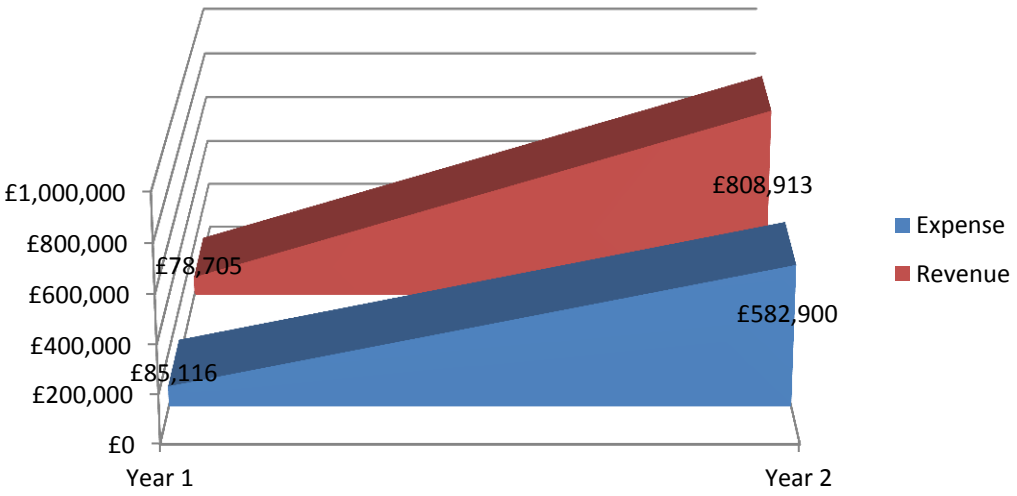

Figure 22 – 2 Year Revenue and Cost Development

5.7.3 Gross and Operating Margins

Based on the figures above and excluding the investment cost (£52,400), the profit margins before taxation are shown in Table 14 – 2 Year Profit Margin Projection below. Tax is not included in the calculation for the second year profits since the investment spending is tax allowable (Dawes, 2012) and also EMREG did not include tax in their projections.

	Year 1	Year 2
Revenue	*£78,705*	*£808,913*
Total operation cost	*£85,116*	*£582,900*
Earnings before taxes	*-£6,411*	*£226,013*
Profit Margin	*-8.15%*	*27.94%*

Table 14 – 2 Year Profit Margin Projection

5.7.4 Months to break even

EMREG On – site will achieve break-even point in Jan'14, after 18 months. (See Figure 23) The sales volume to reach break-even is projected as approximately £400,000.

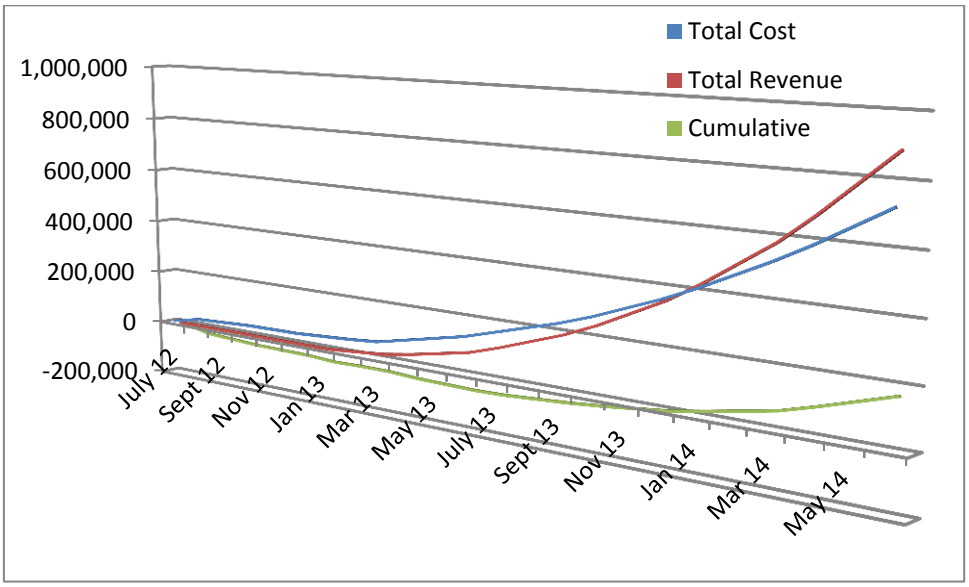

Figure 23 – Break even

5.7.5 Months to reach positive cash flow

Monthly cash flow development is seen below in Figure 24. It is seen positive cash flow is achieved in July'13 with an amount of £2,770.

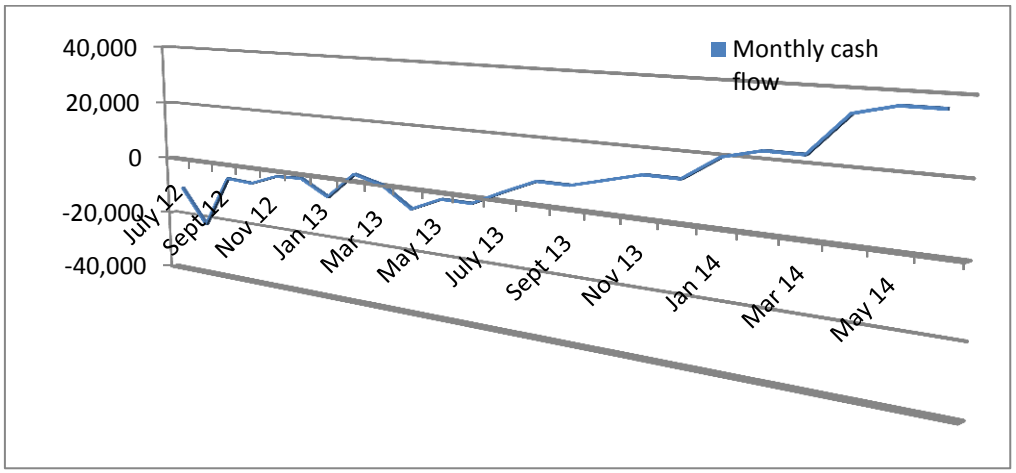

Figure 24 – Monthly Cash Flow Projection

Return on investment

Since cash is very critical for start-ups, discounted cash flow technique (based on the free cash flow for two years) is used for investment analysis rather than revenue multiplier techniques as some venture capitalist use. For Venture Capitalist (VCs), discount rates are taken as higher for earlier stage ventures and lower as company matures parallel with the risk of the company. Therefore, an average discount rate of 36,9 % is taken to calculate net present values of annual cash flows (See Figure 25)[50]. As a result, for an initial investment of £52,400, PTEM concept is forecasted to generate a net present value (NPV) of £63,338 in two year time. Considering the 2 year government bond rate is 5,00 per cent[51] which would yield £55,020, and annual bank interest is 3,75 per cent which would yield £56,403, investment can be considered as economically feasible according to the assumptions and rationales are valid.

[50] FRODSHAM, D. & LIECHTENSTEIN, H. 2011. *Getting between the balance sheets : the four things every entrepreneur should know about finance,* Houndmills, Basingstoke, Hamsphire, Palgrave Macmillan

[51] BLOOMBERG. 2012. *UK Government Bonds Yield & Interest Rates*

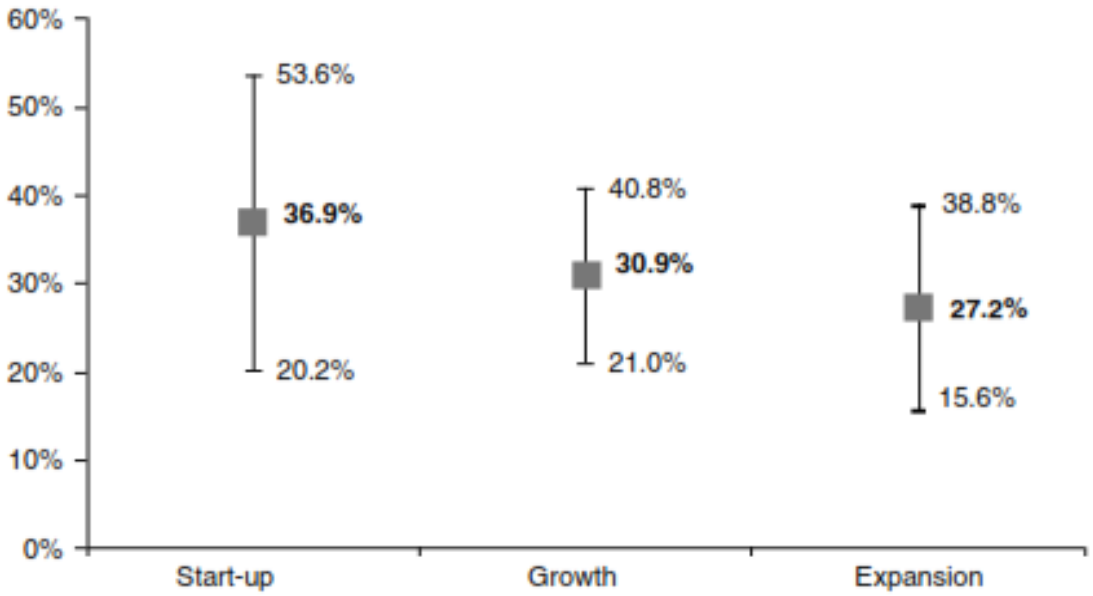

Figure 25 – Discount rates used by VCs in Europe[50]

5.7.6 Assumptions Evaluation

The financial results presented above are based on few major risky assumptions.

- Primary target customer average energy spending is calculated as £530,000 by using statistical data. These data can vary in the real cases which can affect the revenue generation.
- Model is based on three instalment payments. The market response of this proposition is not known at the current stage.
- 10 per cent average energy saving per customer used to calculate the PTEM service fee which is 25 per cent of the total savings. These two assumptions again should be tested in the market. The changes in these numbers can affect the projections severely.
- Every month there will be two new customers generated by each salesman. This assumption is based on the primary data. An energy manager said that she had the target of 30 new customers per year while working for an energy consultancy company. Again, for a new venture it might take more time than forecasted to convince customers and generate revenues.

These risks can be reflected in financials through sensitivity or scenario analysis by changing each critical parameter. An illustration is given below to show the effect of new customer per month parameter. If one customer instead of two customers are added to the portfolio each month by each salesman, then the break even chart becomes as shown in Figure 26. Results show that, total revenue will not able to cover total cost and loss will increase continuously.

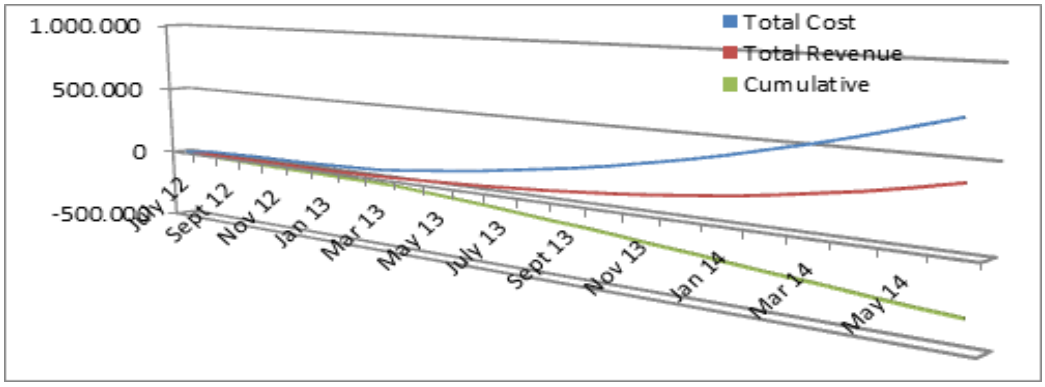

Figure 26 – Break-even for a different scenario

5.8 Overall schedule

Table 15 – Overall Schedule

	Functions to be carried out	
	First half	**Second Half**
Year 1	Pre -Launch Phase *(July'12 to dec'12)*	Post Launch Phase *(Jan'13 to June'13)*
	*Define a business strategy and identify target customers *Define a marketing strategy, list features of service and construct value proposition *Define a pricing structure w.r.t different service on offering *Test the launch of service and list the things need to be changed after feedback from test stage *Launch Website, carry out promotional activities, spread awareness by participating in energy related events and increased communication through social media	*Hiring of a Sales Manager, one energy Manager and one Energy manager Coordinator to take on the initial leads *Continue marketing and promotional activities to spread the awareness about new service *Customer creation starts with a target to reach a total of 10 customers by June'13 *Create a central data collection point which links all the activities carried out and help in controlling of entire service delivery process
Year 2	*Relooking at the strategies and making necessary changes to respond in most appropriate way *Ramping up sales and technical team for regional coverage *Reaching a target of 40 customers by dec'13 end *Scanning the entire target market to generate projects with the help of sales team *Encourage knowledge enhancing programs for the employees and create an atmosphere where good information is shared amongst each other	*This phase will mark focusing on targets defined to achieve and keep ramping up the sales team which focus on spreading awareness to each SME in UK and getting projects for EMREG with energy managers ensuring successful delivery of service. In this phase EMREG will also start moving towards profit generation, so it can look at reinvesting in new technologies and other changes which can help in improving the service offered
Year 3	**Year 3 should be used to check the progress and take a look at the journey of last 2 years. If EMREG has performed well with the strategies and process undertaken, it should continue doing the same by increasing focus to take on bigger firms. If the performance of EMREG is not satisfactory, it should relook at the things which did not work out and make changes to improve the service offering**	

5.9 Organisation

In this section, the report will describe the organization structure in Figure 27, and it will highlight few important things within structure to ensure complete support to strategies chosen and delivery of service designed.

"Organization is a specific configuration of structure, people, task and techniques"[52]. In this section, we are focusing on *Structural* aspect of an organization as it forms an integral component of the organization. *Structure,* illustrates the departments and hierarchy of an organization.

The activities chosen within the chart are completely differentiated at each other. This type of structure divides responsibility and helps in carrying out task without overlapping. Separate departments, technical and sales, are made to carry out different activities and to get a visibility on the entire process; we have recommended a central data resource.

According to our geographic segmentation, we have placed sales team along with energy managers in 4 different target market regions. The energy managers will be recruited from different background expertise, so they will have flexibility in moving around as per the project requirements.

This diversity in energy managers will address an issue which is raised by one of our interviewees who is the energy manager of UoN (Appendix C). According to him, there are few people in the industry who have breadth of skills like electrical, metering, mechanical, energy purchasing etc. In addition, use of diversified teams will develop the knowledge base and bring innovative ideas into the businesses as mentioned in the literature covered in Success Factors section 2.6.

This is an initial design done based on the understanding made from research work. However, EMREG will have to make possible changes and make adjustments for efficient

[52] Leavitt, H.J. 1962. Applied organization and readings. Changes in industry: structural, technical and human approach. in: Cooper, W.W.,et al. New Perspectives in Organization Research. New York, NY: Wiley.

functioning of the organization after test stage. Mentioned below are a few things which EMREG can keep in mind while carrying out the activity[53].

- *Clarity*, there should be clarity and no confusion about people's goals, tasks, functioning and reporting

- *Understanding*, within the organization, each member should have clarity and understanding about their own work in context to whole firm performance.

- *De-centralization, as defined above also that the structure should promote* discussions and decisions at all levels, as people working in the field will have more inputs about the ground reality.

- *Co-ordination*, it highlights the integration of different departments and this will be crucial in EMREG's performance as the service can have different requirements and need to be delivered as a whole with the help of different specialized employees.

[53] Robbins, S.P. 1989. Organization Behaviour. Concepts, Controversiesand Applications. New Delhi: Prentice-Hall of India.

Figure 27 – Organisational Chart

5.10 Risk Management

The risks associated with creating a new venture is relatively high as mentioned few times in this report. This makes it important for firms venturing into any new business or service (in the case of EMREG) to assess the degree of risks and mitigate them as much as possible. This section provides key risks and possible mitigation actions.

Some risks may occur by default, are inevitable and may be out of the control of the firm, in which case steps can be taken to reduce the impact on the company. In many instances however, having a second plan in the form of a mitigation step can ensure that certain risks do not become problematic in the future.

In identifying risks, it should be noted that not all risks carry the same weight and must therefore be prioritised for the resource allocation purposes. Table 16 demonstrates the category, explanation and mitigation of the risks.

Risk Identification		Mitigation
HIGH PRIORITY RISKS		
Human capital	• The energy managers may be hard to find in terms of possessing the required skills and knowledge. • Other companies who may require the services of PTEMs may offer better packages, making it difficult for EMREG to get access to this human capital	Establish good contractual agreements with the energy managers. Hiring a high profile, role model technical manager
Competition from utilities companies	• Some utilities companies are offering software that enables companies to monitor and address their energy management. • SMEs tend to seek advice from their utility providers	Close monitoring to the offerings of utility companies and develop complementary products Manage the client relationship and communication at high levels
Technology	• Technology that EMREG puts in place may become obsolete and easily put them out of business.	EMREG will need to be up to date with trends in energy management systems and ensure that the energy managers are up to date.
Control and accountability:	• There is the risk to lose control over the process since the PTEMs will not be stationed at a particular location and will be working mostly on their schedule. • Monitoring of activities may become challenging as clients increase in number.	EMREG's top management visits to key customers Collecting customer feedback in various stages of the feedback
Competition from other energy companies	• Per the existence of other companies offering this service but without emphasis, there is the possibility for such companies to adopt this concept as a vital aspect of their service offering • This may result in price cuts, and will have implications for Emreg as they may tend to be seen on the market place as similar to everyone else in the eyes of SMEs as well as diminishing the first mover advantage that EMREG may have	Providing warranties to reduce the financial risk with poor service quality Minimising the staff turnover, developing close client relationship Associating the service with tangible products

LOW PRIORITY RISKS		
Economic crisis:	• With the current economic crisis, SMEs may be reluctant to spend on energy management, which may not be high up their corporate agenda. • Government as well as other bodies provides similar services at no charge to small companies. This can be a huge challenge is getting SMEs to sign up for the PTEM service. • SMEs may turn to such bodies in an attempt to reduce costs. This is however not of high risk since there are huge budget cuts by government in recent times. This can imply that SMEs may have to indulge in the services of companies like EMREG.	EMREG should generate more awareness about energy management within SMEs with a strong hint on the cost savings achievable and new sales opportunities
Foundation of the business model	• The identification and segmentation of the market size in this report is based on information available and may be limited in depth. The business model proposed may therefore not reflect the true market situation and may result in inaccuracies if used as an exhaustive plan.	The market research should be validated and tested before the lunch of the final service. EMREG should also be flexible enough to adopt to any unforeseen changes that are identified later in the execution phase

Table 16 – Risk Management

6 IS PTEM OPPORTUNITY IS VIABLE AND FEASIBLE?

In evaluating the feasibility or otherwise of this new service, a comprehensive screening tool[49] is adopted to conclude the business plant. This model is identified as being very useful and relevant to the service concept in question because it addresses the critical aspects of a venture creation i.e. market and margin related issues, competitive advantage and value creation. (See Table 17, Table 18, Table 19, Table 20)

The model uses specific parameters to determine the attractiveness/ success of a new venture through a screening process. The parameters are scored on a low- high basis in order to give an indication whether such a venture is worth pursuing. This model is not an absolute measure of the attractiveness of a new venture. In this case a new service and is only used as a tool to give an indication of whether EMREGs service (PTEMs) is a viable one, and the extent to which it is if identified as viable.

I. Market and Margin Related Issues

Criterion	Higher Potential	Lower Potential	Response in context to EMREG
Need/want/problem/pain point	Identified	Unfocused	Identified
Customers	Reachable and receptive	Unreachable/loyal to others	Reachable but not loyal
Payback to users	Less than one year	More than 3 years	Variable
Value added or created	IRR 40%+	IRR less than 20%	IRR 40%+
Market size	$50-$100 million	Less than $10 million or $ 1+ billion	$ 35.8 to $71.6
Market growth rate	More than 20%	Less than 20% contracting	1.8% and above
Gross margin	More than 40% and durable	Less than 20% and fragile	N/A
OVERALL POTENTIAL			
1. Market	The need in the market and global agenda on climate change make PTEM service attractive. Also, PTEM service offer the clients high IRR's with warranty policy.		
2. Margins	The gross margin expected from the calculation is 28% and it will grow considering the scenario.		

Table 17 – Screening (Competitive Advantage)

II. Competitive Advantage: Relative to the current and Evolving Set of Competitors

Criterion	Higher Potential	Lower Potential	Response in context to EMREG
Fixed and variable costs	Lowest	Highest	Medium
Degree of Control (Prices and Cost)	Stronger	Weaker	Average and variable
Barriers to competitors entry	Can Create	Weak/non	Weak, easily imitable
Lead time advantage (product, tech, people, resources)	Slow Completion	None	Not for very long, as competitors can catch up
Service chain	Strong edge	No edge	designed to have strong edge
Contractual advantage	exclusive	none	None, everyone can access to them in market
Contracts and networks	key access	limited	Average
OVERALL POTENTIAL			
1.Costs	Fixed costs are not high in first year, but not the second year due to new recruitments.		
2.Channels	Like EMREG, everyone in market as access to the contractors and other expertise. EMREG's current network is an advantage.		
3.Barriers to entry	Barriers for entry is low		
4. Timing	PTEM service has its differentiated advantage at this time. EMREG can maintain its service delivery model intact by offering quality and satisfying customer		

Table 18 – Screening (Market and Margin)

III. Value Creation and Realisation issue

Criterion	Higher Potential	Lower Potential	Response in context to EMREG
Profit	10-15% or more and durable	Less than 5%; fragile	28% and more
Time to breakeven	Less than 2 years	More than 3 years	1.6 years
Time to positive cash flow	Less than 2 years	More than 3 years	1 year
Net Present Value	N/A	N/A	Higher than bank interest and security bonds
Value	High strategic value	Low strategic value	High strategic value
Capitalization requirements	Low moderate; fundable	Very high; difficult to fund	Low and fundable
Exit mechanism	IPO, acquisition	Undefined; illiquid investment	-
OVERALL POTENTIAL			
1. Timing	EMREG is achieving breakeven and cash flow in less than 2 years' time		
2. Profit/free cash flow	EMREG is expected to make good profit and started to make positive cash flow in 1 year. Also, high NPV makes attractive for the investors.		
3. Exit/ liquidity	N/A		

Table 19 – Screening (Value Creation and Realisation)

OVERALL POTENTIAL

Criterion	Go	No Go	Go, If
Margins and markets	☺	-	-
Competitive advantages	-	☹	-
Value creation and realisation	☺	-	-
Risk-reward balance	-	-	☺

Table 20 – Screening (Overall)

To conclude, the screening provides two 'Go', one 'No Go' and one 'Go If' outcome. PTEM service as defined in this business plan designed to meet the gap within the energy management services market in UK. Considering that energy inefficiency could be costing small businesses as much as £7.7 billion a year according to recent EON survey[54], PTEM service with its unique proposition can bridge this gap. In addition, analysis demonstrates that PTEM will address the pain points of SMEs. On the other hand, easy imitability, high rivalry and financial risks are the important downsizes of this new service.

[54] GREENWISE. 2011. *energy efficiency news | SMEs missing out on £7.7 billion energy efficiency savings* [Online]. Greenwisebusiness. Available: http://www.greenwisebusiness.co.uk/news/smes-missing-out-on-77-billion-energy-efficiency-savings-2729.aspx [Accessed 02.07 2012].

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8 APPENDIXES

Appendix A - Services

- Be abreast with potential energy and water saving products
- Maintain records of energy suppliers, transportation and metering companies, and regulatory bodies
- Maintain links with current and potential energy suppliers
- Prepare invitations to tender for energy supplies
- Collect and collate half-hourly demand profile data from electricity suppliers and corresponding data for fuel consumption
- Maintain a register of energy-saving opportunities
- Maintain a watch on prices and other developments in energy markets
- Recommend changes in patterns of consumption to minimise transportation charges
- Check energy supply invoices and obtain refunds and rebates
- Conduct or arrange energy audits and surveys, performance tests and investigations
- Ensure timely collection of in-house meter readings
- Collect weather statistics, occupancy and production figures, and other measureable variable factors which affect energy consumption
- Establish normal relationships between consumption and relevant driving factors
- Analyse energy consumption histories on a weekly basis (say) to detect exceptions
- Report on energy consumption and costs, associated transmission and distribution costs, budget variances, costs of exceptions, and savings achieved
- Assist with the preparation of energy budgets
- Devise a strategy for reducing energy costs and environmental impact
- Coordinate an energy committee and energy champion
- Develop a programme of energy-saving projects
- Measure and verify the savings achieved
- Monitor and advise on legislation, regulations, and carbon trading schemes
- Diagnose, investigate and rectify detected exceptions
- Conduct or arrange staff awareness and motivation programmes

- Operate an energy-saving suggestion scheme
- Devise, commission and deliver or supervise energy training programmes
- Assist in the development of energy-conscious design, maintenance, and operation policies
- For those who wish to demonstrate that they have a coordinated and systematic approach to the work (and the explicit backing of top management) their procedures, processes and documentation can be assessed against the international standard ISO 50001.
- Implement sub metering and data logging where required

APPENDIX B – Interview Questionnaire

EMREG

PART TIME ENERGY MANAGERS PROPOSITION RESEARCH

F2F / DEPTH TELEPHONE INTERVIEW DISCUSSION GUIDE

INTRODUCTION

- Introduce yourself and briefly explain objective of the discussion:
  - To find out more about your current business issues and challenges and how you are dealing with them.
  - To gauge your reactions towards a new SME support service, which we will explain to you in more detail later.

- Agree that the interview will be audio recorded and explain reasons for this (i.e. so we can listen to and capture everything you have to say to ensure we don't miss anything of interest).

- Stress the fact that there are not necessarily any right or wrong answers. Advise that the questionnaire has been prepared in accordance with the Market Research Society Code of Conduct, meaning that their your (the interviewee's) views will be reported in such a way that they cannot be identified to either them or their company, or used for sales purposes.

- Start by asking the respondent to provide a brief overview about themselves and their company:
  - First name?
  - Current role and responsibilities?
  - Brief overview of the company they work for (nature of business, size, time established, sector/s of operation, scope of business – local, national, international)

CURRENT BUSINESS ISSUES AND CHALLENGES

Ask a series of questions to find out more about how the respondent's business is currently performing, and the issues and challenges they face…

- How well is your business performing at the moment? What has driven recent performance?
- IF NOT MENTIONED IN RESPONSE TO PREVIOUS QUESTION, ASK… To what extent is the current economic climate impacting on your business? How is it impacting on your business?

- What are the main concerns for your business at the moment? What are the main barriers holding back your business from growing?

- What are the top 5 main things that you are focused on within the business at the moment to meet your key objectives and targets?
    - Raising finance
    - Managing / reducing energy / fuel costs
    - Improving productivity / efficiency
    - Pricing issues
    - Reducing overheads (rent / rates, salaries, supplier costs, etc.)
    - Legislative / regulatory issues
    - Product / service quality issues
    - Business crime / fraud
    - Developing new products / services
    - Marketing / Business development
    - IT / Technology issues
    - Environmental issues
    - Re-positioning / re-branding
    - Improving / aligning culture within the business
    - Staff training / skills development
    - Growth / expansion into new sectors / areas

- Staff retention
- Introducing new systems / processes
- Growth / expansion in international markets
- Re-location

If energy is in the top 5,;

- "Why is that?
- Is Energy moving down or up your agenda? Why?

If energy is not in the top 5,

- Why is that?
- Is Energy likely to become one of the top 5? If so, when?

MANAGING AND REDUCING COSTS

Next move on to explore current behaviour in terms of managing and reducing costs…

- So to what extent is your business focused on looking to reduce costs?

- Where have you specifically focused your efforts recently to reduce costs / overheads? PROBE FOR SPECIFIC AREAS

- Where are you looking to make further savings moving forwards? PROBE FOR SPECIFIC AREAS

- Approximately what are the annual energy costs for your business (i.e. costs for gas, electricity, LPG, fuel)?

- Have you made energy savings within your business within the last two years? If so…
  - Where have you made energy savings?
  - What have you done?
  - What was the trigger / influence to do this?

- How much have you saved?

ATTITUDES AND BEHAVIOUR TOWARDS ENERGY MANAGEMENT

- What is your understanding of the term 'energy management'? Could you give me your definition please?
- Have you ever looked for or received advice or support on energy management?
  - IF YES:
    - Where did you look? What resources did you explore?
    - Did you use the web or social media – if so which ones?
    - What advice / support did you receive?
    - How useful did you find this? Why / Why not?
  - IF NO:
    - If you were looking for advice and support on energy management, where would you look?

- Have you been approached by anyone offering to provide advice or support to help you with your energy management?
  - IF YES:
    - Who?
    - What service did they offer?
    - Have you been given any indication of the price structure (Hourly, package, saving sharing etc.)

- How focused are you on energy management within your business?

- Who, if anyone, assumes responsibility for energy management within the business?
  - Is this a dedicated role or part of wider responsibilities?
  - Do they have specific training / expertise in energy management?

5. Understanding of the current situation

- What activities do you specifically undertake as a business in managing energy to reduce costs and carbon emissions?
- Could you summarise the behaviour of employees towards energy management?
- Do you think behavioural change is important to implement energy management systems?

- Does your company have a formal energy management policy?
  - IF SO:
    - How long have you had this in place?
    - What were the key triggers to introduce this policy?
    - How easy have you found it to implement this policy within the business?
    - Did you seek external help to develop and implement this Energy Management Policy, and if so, who from?
    - Were you satisfied with the service that was provided? If not, what improvements can be made?
  - IF NOT:
    - Why not? Is there anything precluding you from having one?
    - Do you plan to do this, and if so when?
    - How difficult would you expect this to be?
    - Would you expect to need external advice / support to set up and implement such a policy?

- Are you aware of ISO 50001?
  - IF YES:
    - What is your understanding of this standard?
    - Are you working towards or considering working towards this standard or any other e.g. Carbon Trust Standard or ISO 140001?
    - Why / Why not?

REACTIONS TO PTEM PROPOSITION

This final set of questions is aimed at gauging reactions to EMREG'S PTEM proposition…

- To what extent do you believe there are savings to be made through formalising your energy management?
- What percentage reduction do you think might be reasonably achievable?

- Would you envisage the need for external advice or support in this area? If yes, Why? / E.g.
  - Potential savings
  - Lack of time / resources
  - Limited skills / expertise in-house
  - Other

- If not, why not?

- If yes, what level of support do you think you might require to help your business with energy management?
  - x days per week / month / quarter / year)?
  - One-off / ad hoc service?

- Introduce EMREG's PTEM proposition:
  - To provide a highly skilled energy manager who would work within the business on a part-timeor ad hoc basis
  - Allows you to access the services of a fully trained and qualified energy manager on a part-time basis and at a cost below that of a full-time employee.
  - You could choose how frequently they would need to be at your site (e.g. once a week, twice a month, to meet your requirements).
  - In most cases, engaging a part-time energy manager would be cash neutral or positive (i.e. the savings / benefits would outweigh the costs)
    - What is your initial reaction to this proposed service?
    - Do you regard it as different to anything else that is out there for SMEs to provide support with energy management? If no, who is offering a similar service?
    - What do you see as the positives / benefits?
    - What concerns, if any, do you have about the service?
    - Is this something you would be interested in? Why / Why not?

- Which pricing model is more suitable for this idea (Hourly/ package/ saving sharing…)
- How much would you expect to pay for this service (cost per day)?
- If you were to invest in energy management services what would be the maximum acceptable payback period for you?

- IF LESS INTERESTED IN THE PTEM PROPOSITION, ASK… How might this service be changed so that it was of greater interest to you? Ideally what would you want this service to look like?

CLOSING

- Ask respondent to offer any final thoughts / views.

- Thank and close.

(1)Energy Manager of UON

- UON has approached a consultancy, 3 different consultancies are right now conducting surveys in several building at UON
- According to him, all the consultancies have a similar approach on offering their services, they tend to ask energy data at first place. One consultancy has a slight different approach, where they do a modelling from the data which is provided and come to a theoretical best figure or minimum energy use for that building.
- He expects one consultancy to do a survey on a building and then ask another consultancy to do survey on a similar other building in order to compare the quality of work and figure out the variations.
- The consultancies are not involved in the implementation process, only give a list of areas which can be improved or changed with a payback period defined. This information is good enough to go and ask for quotes in market and implement the recommendations with the help of UON personnel in estate office.
- UON is currently spending almost 0.5 million a year on energy management projects
- He does feel that behavioural change plays an important role in energy saving, it's an easy pick to save at least 5%.
- He also proposed a way where one can change behaviour by incentivising staff, so that they are more motivated and have reason to save energy. Only with like offering few 100 pounds can make a difference.
- No ISO standard certification at UON. It is already doing the processes of ISO, but haven't applied for it because he felt that ' there is bureaucracy, cost and extra time involved , also one has limited time to do their job, however there may come a point where it becomes an industry standard to follow and UON would have it'.
- His reaction towards PTEM was that not many people in the industry are there who have breadth of skills like electrical, metering, mechanical, energy purchasing etc. He thinks that energy is quite a wide discipline and across the country, there are not many people with skills. Even he felt that after working for 20 years he has strengths

but weaknesses too like not strong electrical background. These things will be crucial if PTEM are launched

- He liked the proposed way of functioning for PTEM where in his involvement is more at the start and becomes less over time. So paying for days would make sense
- Quality can be variable depending on who you get and to what extent details are required. There is a downside also when time is wasted in showing around the facilities. Consultancy should quickly get used to the facilities and understand what is required. All in all save initial time. So working with one company is better if the company understands the requirements. 'The longer you work with one consultancy better the results will be'
- If consultancies are able to keep the initial cost low, companies would be interested in it and Looking at the bills can be another improvement area like the energy purchasing and billing side.
- If consultancies are able to keep the initial cost low, companies would be interested in it.

(2) Operation director - Manufactures full range of thermal and acoustic mineral wool products for the construction industry

- The situation of getting projects financed is crucial at the moment where banks offerings are also less, recession etc.
- Energy is in top 5 issues faced in the business , energy costs are very high and it is a major part of the cost of final product because the site has furnaces
- Annual energy cost for the business – £ 6.5 million for year 2012, turnover £ 38 million, total costs of goods sold - £ 25 million, raw material cost is £ 10 million
- The energy savings made have been negligible because 90% of energy consumption is linked to the processes of furnaces which is the heart of the business
- Support on energy management from two different types
    - Carbon Trust – it did the entire mapping and carbon trust found. Service was very useful to get a priority list for improvement areas.
    - Independent Consultants –approached them to install efficiency equipment's. Wasn't much useful because of funding constraints.

- Don’t have any dedicated energy manager but it has a process manager to look after optimising the usage of furnaces where 90% of energy consumption lies
- He is open to receive advice but needs support financially to make things happen. Funding of projects is a problem and won’t be interested to make any savings on other 10% energy costs, due to time constraint, costs and other responsibilities
- More interested in risk free services, it would be difficult to offer a consultancy 5-10k initially without knowing the benefits. ‘Access to knowledge is not a problem its access to cash, funds’.
- Will be more interested in saving sharing pricing model but need help on financials maybe govt. led initiatives like green bank etc.
- It will be important that how EMREG partners with whoever is offering the finance for the projects. Since companies need funds to implement the energy efficient systems and with no cash on hand they might not even do it.

(3) SME - Operations Director – From in-store marketing industry, making displays for brands and retailers, 60% overseas and rest is UK

- £10mn, 80 employee, 6000 ft2 space
- Top priority areas;

Buying better, managing costs

Sustainability, implementing sustainable designs, principles

Improving productivity (everything design for the customers specifically), manufacturing cheaply

Overseas sourcing strategy

- Energy is not top priority. Sustainable designs are important. More focused on customer demands on sustainability rather than energy specifically.

  Focused on manufacturing and sourcing for cost reduction. Moving outsourced processes in-house. Gave the example of CNC machine. Saving money from this shift at the same keeping H&S, energy in mind. Sustainability is embedded in all operations.
- Total cost is around £6mn, App. £100K is energy cost

Energy management definition; Sourcing right energy (green energy possibly) for the right price, then managing the use of the energy. Energy efficiency in the process. For instance; Having appropriate lighting, compressors, etc.

- Many companies are contacting them for energy services they are not looking for. Visits are more about the purchase of the energy. Agents are searching the market for cheaper energy options and get commissions from the savings. Also, Energy suppliers are helping the businesses.
- For the purchasing of energy, He would use electricity suppliers and get the data from them. He would look at the internet for the energy efficiency consultancy.
- No dedicated role for energy management
- Thinks behavioural change is critically important
- Not a separate policy for energy management. Since it is a small percentage of the cost, they don't plan to implement in the future. They want to keep it simple to make it easy for people to understand.
- He believes energy saving for the first year can be 20-30% and following years 2-3%
- Comments about PTEM proposition;

  'It is probably a bit different. Existing offers are trying to sell the products and charge a commission from the product'. Because there is a follow-up, it is different

  He thinks it would be difficult to persuade people that this offering is different. Because existing offers targets to solve your problem and once they solve, help disappears.

  PTEM should be result based priced. So saving sharing is relevant

  He may pay 30 - 50% from savings. The savings for the first year would be high and then it will decrease in the following years. There should be some recommendations how to keep the cost lower in the following years.

  He emphasized that it would be difficult to persuade the people that you are different.

  But if you market it, he thinks there is a potential.

(4) Managing Director of an SME, providing facility service to environmental businesses

- Responsible for the managing the building, refurbishment, maintenance and energy usage
- Main activity is to run Nottingham CleanTech Business Center, 7 employee (mix of full-time and part-time), providing space for companies working for clean technology and green business.
- No annual revenue information is given due to the fresh establishment
- Comments on current economic climate;

  Things are very tight. His experience demonstrates a slowdown of business activities. Government cuts affected their business significantly. Because their business is funded by East Midlands Agency and Business Link and these organisations gone. There are new schemes but there are no the way. Currently they fund their business privately.
- Top Priorities

  Revenue generation/grow the business

  Networking / marketing the company

  Energy performance of the building

  Cost Reductions
- Energy is a target area to reduce energy cost. Just an audit done.
- Annual bill: Electricity: £750/yr, Gas:£2771/yr (the building is not fully utilized yet)

  Audit is done by Future Factory in Nottingham Trent University. Future factory paid for an independent consultancy to do an energy audit. They have a baseline now and report includes many recommendations to improve the performance. The audit report do not inform about finance options.
- Employees and tenants awareness is really high due to the business they are in.
- He would need external support for certainly for the implementation not the policy making.
- Heard about ISO 50001 but no detailed knowledge
- He believes about savings by implementing EnMS can be 'At least 20%, probably more

But to achieve those savings, it might require significant investments i.e. where the money comes from, what is the risk profile, etc. Mentioned about Green deal. It will take 18 months green deal will be available to some businesses. If the green deal offset the money for investment, it could be very interesting.'

- He gave the example of lightening. A company said that if they change the lighting, payback will be three years. But these people want to sell, so how can you be sure that that is the reality?
- Comments on PTEM concept;

  Difficult, because there is a cost attached. That would be off putting because you will pay upfront. And how will finance the recommendations? Large businesses have already energy managers, but for smaller business, how they can solve the issue? As long as it is not so expensive and cost is spread over the months for the first year, or even first couple of months. That might be a risk for the company offering. It might not be interesting for me if a company offer me an energy audit for £2000 for this amount of saving but there is no guarantee. I might be more interested if somebody comes along and says; we will share the risk for you, we will work with you and after 4 months we will be paid from your savings.
- 'I have not come across the same model' People came up with similar offerings (saving-sharing type) for a specific technology like LED lightening. But I can spend money on LED, biomass boiler or solar panel. What should be the best choice /most effective for investment? That is difficult to get from a supplier'

- Saving-sharing can be helpful. It has to be a shared risk. Company also should get some pain to involve in the process (commitment). But also some risk should be taken by consultancy.
- It is critical to set the right initial charge. For instance, for a small company £2000 may be reasonable but £10000 would be inhibitive.
- He mentioned his past experience in waste water chemicals sales and consultancy. The politics inside the company is critical. You might say to a company after an audit that they can save £100K, but it can be vulnerable to some employees and they might be fired. If the ideas or recommendations are done together with the staff, it would be easier to get the contract and implement the system.

(5) Energy Manager – Business Owner of an energy management service company

- He does not want to call himself as consultant because it is perceived as money! He prefers 'specialist'.
- His business model is;

  1 week intense meeting and data gathering >> write a report; identify potential improvement areas>> build a joint roadmap (actions, targets, timelines and responsibles) >> 5 year contract >> revenue model is saving sharing based on 6 months performance >> Three variants of the energy conservation service types offered with pricing structure: 20%, 30% and 40% of savings >> Invoice is delayed for 6 months until two energy consumption quarters are established and the savings used to calculate the payment in arrears and predict the next two quarters.
- Energy managers should be accredited
- He considers he can charge £400-450/day for a training day as a separate product
- 'Don't get into and do a consultancy service and walk away. 6 months later they will stop what they are doing'
- He thinks for the first 6 months no income, and 1st year will be tough. And then when the customer number increases and savings increases YOY, income generated will become higher
- Inside the SMEs, you need to find the leaders, you need to find someone who is passionate about energy management to be successful.
- He uses referrals, network, and testimonials on the website
- 'Getting in that door, that is though'

(**6,7,8) Director at Environmental Technology Center, UoN (several years of experience in energy sector, worked for E.ON)**

Project Officer at Environmental Technology Centre, UoN (worked as an energy consultant)

Knowledge Transfer Partnerships Manager at UoN

- ETC is about helping and supporting SMEs in East Midlands on energy efficiency, environmental and sustainability
- Most of the SMEs wants to reduce their costs, energy bills but ETC also looks at other issues on environmental performance. Therefore. He mentioned that for the business model, we may want to look at other environmental services as well as energy by providing energy support and then look for other additional / complementary opportunities (production methods, green credentials, transportation, waste management) You may use not the same associates for different tasks, there are many people who can bridge these gaps.
- Training is critical for creating ownership and accountability by staff but also differentiating your offer. You can tell customer like this 'I can either do this for you but even better we would lead this legacy by training'. It will break down the barrier. You will work with them not for them, this is critical
- SMEs would be much more receptive to the idea of other interesting services; environmental development.
- Gave the example from Czech Republic that a company changes its production schedule to make sure that their logistics is more efficient and simple. This is a sort of thing also EMREG can offer.
- For instance, when you make an equipment work less with a better efficiency, you save two things energy and life of the equipment. They will not realize until you tell them, because they (operators) may say 'I am here from 9am to 5pm and I do my job'. You should tell in such a way that they should realize that they need to improve processes for the sake of their job; if they don't do that company will not compete and they may not get pay rises and even lose their jobs.
- Since energy managers cannot perform other tasks such as operational or environmental, there may be need for other professionals. SMEs do not bother about

who is coming in if they pay the same money. There should be one contact who is doing the calls.

- It is good to have one face but also SMEs would easily accept the experts from different areas. This will also benefit to the consultancy in terms of reputation.
- Based on her experience, it is important to talk the same language with the business. For example, if the client manufactures cake, the consultant better have a background or knowledge on that process or industry.
- 'It is important to work with them not for them'. You should communicate this approach. 'Solution may come from outside, but issue always has to come from shop floor'
- 'Good communication with the client is essential for the success'
- After mentioning our target segmentation, he commented on the third segment which has the 200-250 employees. In this segment, there may be potential conflicts with the dedicated employee since they may be offended from your offer. You should make sure that you get the full support from MD of the business. So there is a need for a different approach to this segment.
- You should be flexible and offer 2-3 more solutions and make them select their best choice.
- Senior buy-in is critical from the beginning to avoid the resistance.
- You need to have a structure for the target segment3. You should say this amount within this time because they are large companies, they have already structures.
- On mentioning our geographic segmentation, she mentioned that some sectors may be more energy intense but it does not mean that they are energy inefficient. Their output might be extremely efficient. (gave the example of cement manufacturer) Energy intensity is a good measure but you should keep in mind this fact.
- Building case studies make a big impact very quickly to increase customer number. If you approach a customer with a familiar story, it will definitely help you to get the contract. Therefore, knowledge management is critical.
- They like our idea of building reputation in each target industry by having one or two references with discounted pricing in order to create case studies and use in to other customers.

- There is no supply problem for energy consultancy but the problem is there is no perfect solution provider for SMEs. She mentioned about the importance of testing before launch. (in line with NSD literature) This can be done with clients who can be potential reference for the business in future.
- It would take 4-5 days to make initial assessment for a company without any existing process in a primary target segment. This is not the difficult part of the job. The difficult part is how you engage staff with a part-time support model. There should be incentive models for the staff.
- It would be important to create a customer portfolio from different industries and segments so that you can have a continuous cash flow. Because some projects may take 1-2 years but some may take 1-2 month.
- It would be a disadvantage to offer during the first meeting. He liked our idea of ; first doing an audit with competitive pricing and then choosing the right pricing and contract model'
- Gave the example of using the same language to approach clients. Front end is important. If you present yourself with ex MD of a local business in that specific industry, you would manage to open the door.
- There is always an **ambassador** and a **translater**.
- There is a barrier for EMREG because it is commercial. Companies will always think about how much EMREG will charge to them. ETC has a clear comfortable position since it is free and funded by EU. So it would be better to be transparent and open.

(9) Board Director at Health Centre

- Health Center provides emergency medical services, doctor service with 700,000 GP practise here. It has operations in 3 buildings. And it funded by NHS.
- Energy comes under the overall efficiency of functioning and reducing overheads and Energy has moved up in their business agenda in a way to have overall efficient working, where energy comes in having energy efficient lighting/ AC/ Lifts etc.
- Annual Energy bill for two buildings £ 14,000 and £21,000 respectively.
- They made energy saving from a building where energy consumption went down from 120KVA to 90 KVA by installing energy efficient equipment

- He is looking for support from his own contacts and NHS
- Health Center has taken assistance from Edmond Shipway, a local consultancy. The service offered were related to specific things because Peter May himself comes from the energy background and with the help of his colleague who has energy management as separate role were capable of doing things themselves. The assessment gave Health Center a list of things to be installed, so Health Centre itself contacted the market and procured things.
- It has also been associated with, BREEAM is the World's leading environmental rating tool for buildings and the Building Research Establishment (BRE) Environmental Assessment Method for buildings. Which has further recommended on installation of lifts, heat recovery unit procured from Mitsubishi
- Health Center does not have a formal policy in place but does have certain process followed to manage energy
- According to his personal experience he felt that not all the energy mangers in the industry will have different skill sets. So it is very crucial for EMREG to have sourcing to speciality service providers (like energy brokers who help in getting better deals for energy buying)

His comments regarding PTEM concept;

- Organizations like us are self-capable of doing improvements but EMREG should be able to offer a package of services like thermal model imaging of building, insulations etc. So that EMREG doesn't come and start with energy survey.
- Also the delivery of committed service should be done perfectly else it will not gain the credibility.
- PTEM should be able to maintain good relations and should be able to quickly understand the requirements of organizations instead of sitting around and doing a typical consultancy work.

(10) Managing Director at a local mould manufacturer

- Company is into design and manufacture of precision injection mould tooling and plastic components. It has 20 employees in total.
- Energy is currently not in the top 5 concerns of the business since Total energy cost is not very high (20,000 – 25,000 £ a year), so it is not given any priority in the business. (2.5% of the turnover)
- They specifically focused on changing the machinery and getting new more energy efficiency machines for manufacturing to reduce costs/overheads
- Company saved approximately 30% by considering last 5 years changes by changing equipment
- Took support from a local business who did the assessment for free
- Regarding behavioural change, he believes that general awareness towards energy management and simple practises would be helpful
- There is no formal policy in place and he does not think that having it will make big difference

His comments regarding PTEM concept

- According to him, his business is very small and similar business do not have a dedicated person to look after energy consumptions. Hence, this service will be more attractive to large companies. Because small business can't pay the consultancy fees. He cited the example, that if consultancy asks for 10,000 £ and the energy costs for the year is 20,000 £ that doesn't make sense.

(11) HSE manager in a multinational abrasive manufacturing company (survey only includes the plant in West Yorkshire which is considered as a SME)

- Top 5 business priorities
    1. Improving productivity and efficiency
    2. Reducing overheads
    3. Growth/expansion in international markets
    4. Developing new products/services
    5. Product/service quality issues
- Energy is not in top 5 agenda since energy costs are not a s a big factor as other 5
- Costs reductions is major driver for the business
- Made improvements in heating with electronic management systems. Trigger for this project is cost analysis/payback period
- Energy management means 'ensuring adequate energy resource is utilised to optimum requirements'
- They took support on energy management from Carbon Trust and found the service quality very good. Lighting and air compressors have changed.
- He looks support from various sources when needed. These are Carbon Trust, BSI, Environment agency and Robert Bosch teams
- Approached by Siemens to replace light scheme with deferred payment scheme
- They have a 'Switch off' campaign within the business to meet the targets. Managers are more aware the energy management since they have KPIs.
- They have a formal energy policy; BSI energy reduction verification scheme for 1.5 years
- BSI helped them to implement the policy and he was very satisfied with the service from BSI
- Not familiar with ISO 50001, they are working towards 14001 + 18001

His comments regarding PTEM concept

- Cannot justify having an externally accredited management system but working towards a formal internal standard will achieve savings

- Since they have internal group specialists, he would not envisage the need for external advice or support
- He thinks the PTEM service is good for SMEs but not large companies and thinks that lots of consulting companies offer the same service.
- His concerns are overhead and capital expenditure costs
- Save sharing pricing model is preferable, self-funding is essential.

Fig A1 – Top opportunity areas and disciplines that will be constrained, net balance

Source:(Environmental Data Services, 2011)

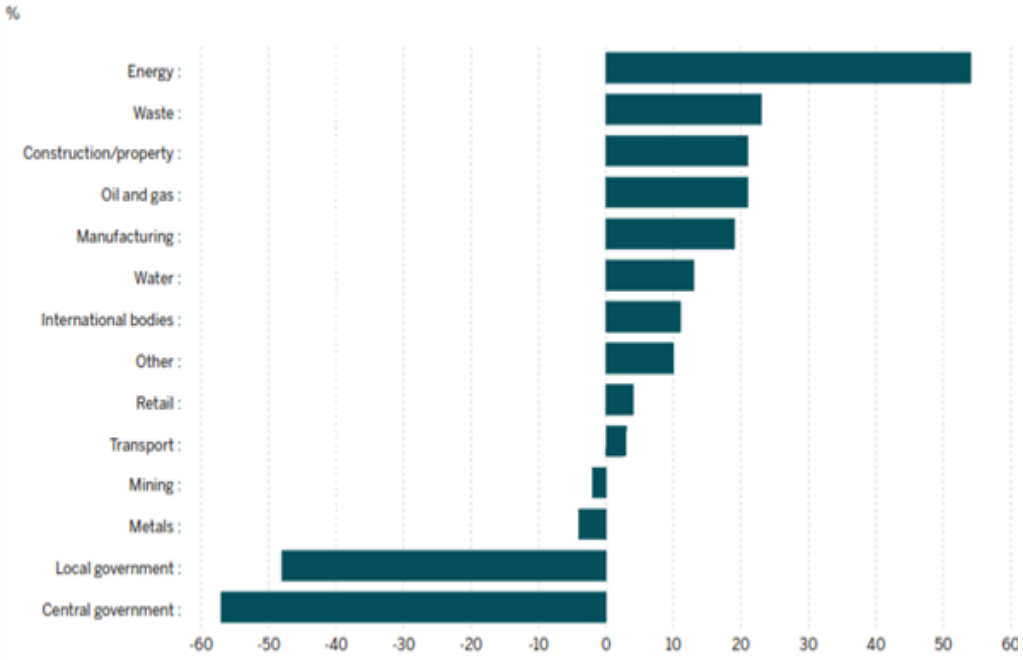


Fig A2 – Growing and shrinking client sectors in UK consultancy

Source:(Environmental Data Services, 2011)

APPENDIX E - Competitors

(Environment Analyst, 2012) In order of market share, the top 32 practices are:

1. RPS Group, http://www.rpsgroup.com/
2. Atkins, http://www.atkinsglobal.co.uk/
3. Halcrow, a CH2M Hill Company,
4. ERM, http://www.halcrow.com/
5. URS, http://www.ursglobal.com/
6. Mott MacDonald, http://www.mottmac.com/
7. Jacobs Engineering, http://www.jacobs.com/
8. RSK Group, http://www.rsk.co.uk/
9. AEA, http://www.aeat.co.uk/cms/
10. WSP Environment & Energy, http://www.wspgroup.com/
11. AMEC Environment & Infrastructure, http://www.amec.com/
12. Arup, http://www.arup.com/
13. Golder Associates, http://www.golder.co.uk/en/modules.php?name=Pages&sp_id=1082
14. MWH, http://www.mwhglobal.com/
15. SLR Consulting, http://www.slrconsulting.com/
16. Bureau Veritas, http://www.bureauveritas.co.uk/wps/wcm/connect/bv_couk/local
17. Capita Symonds, http://www.capitasymonds.co.uk/
18. Parsons Brinckerhoff, http://www.pbworld.com/
19. SKM Enviros, http://www.enviros.com/
20. Hyder Consulting (UK), http://www.hyderconsulting.com/en/Pages/home.aspx
21. Environ, http://environenergy.org.uk/
22. Mouchel Group, http://www.mouchel.com/
23. AECOM, http://www.aecom.com/
24. ADAS UK Ltd, http://www.adas.co.uk/
25. Cefas, http://www.cefas.defra.gov.uk/
26. PwC, http://www.pwc.co.uk/

27. Black and Veatch Ltd, http://bv.com/
28. Arcadis, http://www.arcadis-uk.com/index.aspx
29. JBA Consulting, http://www.jbaconsulting.com/
30. Wardell Armstrong, http://www.wardell-armstrong.com/
31. WYG Environment, http://www.wyg.com/
32. Waterman Energy, Environment &Design, http://www.watermangroup.com/

EMREG's list of competitors (Emreg,2012)

33. Adshead & Associates, http://www.adshead.co.uk
34. Envantahge Ltd, http://www.envantage.co.uk
35. Environmental Strategies Ltd., http://www.esltd.co.uk/
36. T4 Sustainability Ltd., http://www.t4sustainability.co.uk/
37. Economic energy, http://www.economic-energy.com/
38. The Energy Practise, http://www.energypractice.com/#
39. HRC Consultants Ltd., http://www.hrcconsultants.co.uk/
40. Tenby Consulting Group, http://www.tenby.org.uk/
41. GAIA, http://gaiaactive.com/
42. ADIAN, http://www.adian.co.uk
43. Goth Energy Management Limited, http://www.gothenergy.co.uk
44. Kyron Energy and Carbon Solution, http://www.kyron.eclipse.co.uk/
45. Energy Matters UK Ltd., http://www.energymatters.uk.com/
46. Equis Energy Ltd., http://www.equisenergy.co.uk/
47. John Pooley Consultancy Ltd., http://www.john-pooley.co.uk/
48. Eco-rich Ltd., http://www.eco-rich.com/
49. ENER-G, http://www.energ.co.uk/energy-consultancy/

POLITICAL

- Energy is a major political issue both in UK government and EU agenda due to the increasing concerns over global warming, carbon emissions, insecurity over energy supplies and rising energy prices
- UK government is promoting initiatives to reduce carbon emissions and energy saving measures by creating new legislations
- Changes are made to streamline the planning of energy projects.

ECONOMIC

- **Sustainable Procurement:** There is an increasing demand for low carbon / more sustainable good and services in both domestic and international markets. In particular, there is potential for new start-ups and innovative SMEs in the renewable energy technologies, energy storage, local/regional food provisioning, pro-biodiversity activities and transport sectors. For instance, Wal-Mart and Tesco, collaborate with their supply chains to report and reduce emissions through their products whole life-cycle (Middlesex University, 2009).
- It is stated that there are opportunities for SMEs particularly in manufacturing, construction, transport, faming and food production, and also professional services on carbon markets and sustainable business practice (Middlesex University, 2009).
- **Increase in energy prices** As shown below, there is a significant increase in electricity and slight increase in gas prices in last 6 years and expected to increase in the future due to the increase in legislations and depletion of fossil resources. Increase in fossil fuel prices will also have a negative impact on raw materials as inputs for manufacturing such as lubricants, fertilizers and plastic raw materials.

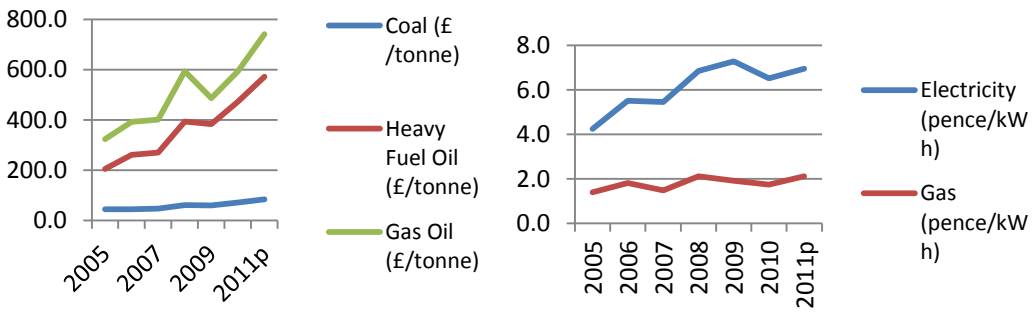


Fig A3 – Annual Prices of fuels purchased by manufacturing industry in UK (excluding the Climate Change Levy)

SOCIAL

The high and rising cost for energy is an increasing problem. There is need for investment for maintaining and upgrading the current infrastructure in firm to achieve energy efficiency.
Need to reduce carbon emission is encouraging to implement energy saving measures
There is concern over aggressive marketing carried out by energy companies which is provoking dislike on promoted energy and related services.

Corporate Social Responsibility: Growing demand in emerging markets and increase in world population cause major global social problems such as environmental pollution and shortage of resources. As a result, corporations are undergoing immense pressure to operate their business in more socially responsible way. It is now a common practice for organizations to install environmentally friendly machinery, use recyclable raw materials and measure to reduce energy consumptions. Although there are evidences that impact of company size on CSR being contradictory, owner-managed SMEs are not necessarily driven by profit maximisation, often demonstrates a strong commitment to their employees and are more likely to be embedded in their local environment (Grayson & Dodd 2007 cited in Middlesex University,2009)

Stakeholder expectation: Increasingly, stakeholders (governments, NGOs, communities, investors, etc.) are demanding that corporations engage in ethical practices and the use of efficient energy management systems has not been and exemption. To illustrate, Carbon Trust which was set up by the government has saved its clients £4.5billion in energy costs and cut their carbon emissions by 47Mt (Carbon Trust, 2012).

According to the **Defra's (2008)** segmentation model of individual attitudes and and behaviour towards the environment, it is estimated that 18% of the population are driven by strong concern for the environment and high levels of individual responsibility to minimize their impact on the environment. This group of the community are most likely to be AB

socioeconomic groups and have the highest household incomes – of 40k and over per annum and called as 'Positive Greens' (Middlesex University, 2009).

1. *'Positive greens'* (estimated to be 18% of the population) – who are driven by a very strong concern for the environment and high levels of personal responsibility to limit their impact on the environment. While they are doing more than any other group to reduce their environmental impact, there is scope for them to do more, particularly in relation to their travel behaviours. They are most likely to be in the **AB socioeconomic groups and have the highest household incomes – of 40k and over per annum.**

2. *'Wastage watchers'* (12% of the population) – who are motivated by a desire to avoid waste of any kind, although they often lack awareness of other pro-environmental behaviour and may be more sceptical than average about the scale and urgency of environmental problems.

3. *'Concerned consumers'* (14% of the population) – who broadly hold pro-environmental beliefs, but with less conviction than groups 1 and 2. They make some compromises for environmental benefit, but balance this with a sense that they 'deserve' to do certain things, like flying.

4. *'Sideline supporters'* (14% of the population) – who have a generally pro-environmental worldview but whose green beliefs are not translated to their behaviours. Most say they are doing one or two things to help the environment and would like to do more.

5. *'Cautious participants'* (14% of the population) – whose environmental worldview is close to the average for the population. Although recognising their impacts they are pessimistic about our ability to tackle climate change and quicker to say that efforts will be negated by other individuals and countries than groups 1, 3 and 4.

6. *'Stalled Starters'* (10% of the population) – holding somewhat confused environmental views: mostly negative, with many seeing climate change as too far in the future to worry about and, with group 7, with the3 highest numbers believing the environmental threat has been exaggerated. They are also the most likely, however (with group 1), to agree that there are limits to growth and that humans are damaging nature, despite not wanting to act on this.

7. *'Honestly disengaged'* (18% of the population) – whose ecological worldview is shaped by a lack of interest and concern and who are sceptical about the current environmental threat. They display no interest or motivation to change their current behaviour to make their lifestyle more pro-environmental and are unmoved by debates about the environment and climate change.

Source: Defra 2008, p. 41-45

TECHNOLOGICAL

· New technologies are getting introduced which require specialist skills to develop and use them to full potential

· Advancements in technology will continue to happen which will help in achieving greater energy efficiency.

LEGAL

Regulation can be seen as both a challenge and opportunity for businesses. It is argued that more efficient and environment-friendly processes can help businesses to become more competitive, obtain new markets and 'first mover' advantages[55] (Middlesex University, 2009).

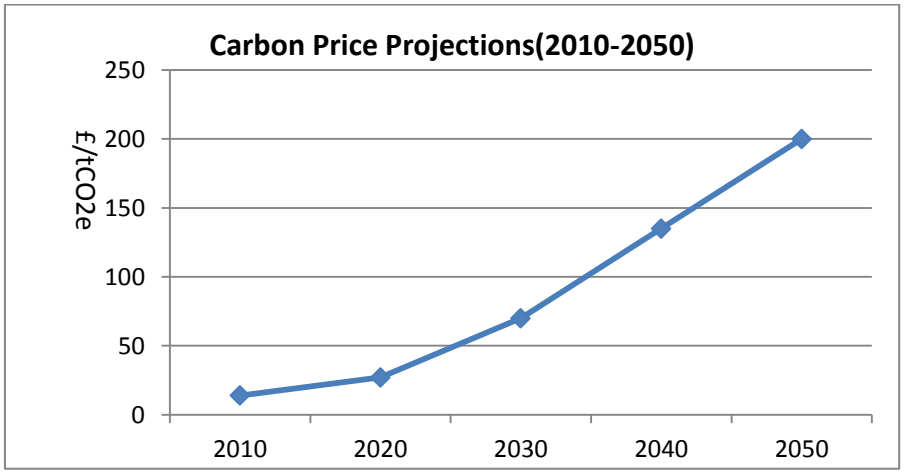
[55] Note that in 2005 5 per cent of EU SMEs reported having subsidiaries or joint ventures in other countries. Nine per cent of UK SMEs reported *any revenue from exports*, compared to Spain 3 per cent), France 6 per cent, Germany 9 per cent, Netherlands 13 per cent, Austria 14 per cent, Denmark 17 per cent (Observatory of European SMEs, 2007)

· The Climate Change Act 2008 encourage the transition to a low-carbon economy in the UK through a reduction of at least 34% in greenhouse gas emissions by 2020 and at least 80% by 2050 (Middlesex University, 2009)

· It is reported that government policies on energy and climate changes impacting energy saving industries added £14.2/MWh in 2011 this will increase to £28.3 by 2020 (EEF, 2012)

· The UK government has put in place series of legislation and policies in the bid to ensure that companies, most notable commercial companies indulge in efficient energy management systems. Amongst some of them are : Feed-in Tariffs, Bio-energy Capital Grants Scheme, CRC Energy Efficiency Scheme, UK Emissions Trading Scheme, Carbon Reduction Commitment Energy Efficiency Scheme (CRC EES), Climate change levy. (DECC, 2012)

· **Carbon prices** is expected to increase significantly in the coming years shown in figure below in line with stretch carbon targets for 2050 (DECC,2010; EC,2010; CCC,2010. Carbon price projection reveals that carbon price will increase up to 200 £/tCO2e from 14 £/tCO2e.



The fourth carbon budget report (CCC, 2010)

Tax: The UK government further promotes energy management systems through the provision of tax incentives. For instance, Enhanced Capital Allowance (ECA) scheme enables businesses to claim a 100% first year capital allowance on investments in certain energy saving equipment, against the taxable profits of the period of investment. (DECC, 2011)

MONTHLY CASH FLOW

EMREG ON-SITE CASH FLOW								First sales P&L start				
	July 12	Aug 12	Sept 12	Oct 12	Nov 12	Dec 12	Jan 13	Feb 13	Mar 13	Apr 13	May 13	June 13
Outflow -One time												
Market Research (Ci Research)	6.500	6.500	1.500	1.500	0	0	0	0	0	0	0	0
Monthly												
B2B Marketing(Earnest)	3.000	3.000	3.000	3.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Ongoing Marketing	600	0	0	500	500	0	4.000	4.000	3.000	3.000	3.000	3.000
employment cost	0	0	0	0	0	0	0	0	0	1.150	1.150	1.150
travel expenses	0	0	0	0	0	0	0	0	0	2.000	2.000	2.000
other expenses	0	0	0	0	0	0	0	0	0	2.000	2.000	2.000
staff salaries				0	0	0	0	0	0	10.000	10.000	10.000
admin support	0	0	0	0	0	0	1.000	1.000	1.000	1.000	1.000	1.000
energy manager salary				0	0	0	0	0	0	0	0	0
management fee	0	12.700	0	0	0	0	0	0	3.417	3.417	3.417	3.417
Misc	300	300	300	300	300	300	300	300	300	300	300	300
total cost	**10.400**	**22.500**	**4.800**	**5.300**	**1.800**	**1.300**	**6.300**	**6.300**	**8.717**	**23.867**	**23.867**	**23.867**
Inflow	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8.745**	**8.745**	**17.490**	**21.863**	**21.863**
Cumulative	-10.400	-22.500	-4.800	-5.300	-1.800	-1.300	-6.300	2.445	29	-6.377	-2.004	-2.004
	-10.100	-32.900	-37.700	-43.000	-44.800	-46.100	-52.400	-49.955	-49.927	-56.303	-58.307	-60.311

EMREG ON-SITE CASH FLOW							Break-even					
	July 13	Aug 13	Sept 13	Oct 13	Nov 13	Dec13	Jan 14	Feb 14	Mar 14	Apr 14	May 14	June 14
Outflow -One time												
Market Research (Ci Research)	0	0	0	0	0	0	0	0	0	0	0	0
Monthly												
B2B Marketing(Earnest)	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200	1.200
Ongoing Marketing	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
employment cost	1.610	1.610	1.610	2.070	2.530	2.530	2.990	3.450	3.450	3.910	4.370	4.370
travel expenses	2.800	2.800	2.800	3.600	4.400	4.400	5.200	6.000	6.000	6.800	7.600	7.600
other expenses	2.800	2.800	2.800	3.600	4.400	4.400	5.200	6.000	6.000	6.800	7.600	7.600
staff salaries	10.000	10.000	10.000	14.000	14.000	14.000	18.000	18.000	18.000	22.000	22.000	22.000
admin support	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000
energy manager salary	4.000	4.000	4.000	4.000	8.000	8.000	8.000	12.000	12.000	12.000	16.000	16.000
management fee	6.500	6.500	6.500	6.500	6.500	6.500	6.500	6.500	6.500	6.500	6.500	6.500
Misc	300	300	300	300	300	300	300	300	300	300	300	300
total cost	**32.210**	**32.210**	**32.210**	**38.270**	**44.330**	**44.330**	**50.390**	**56.450**	**56.450**	**62.510**	**68.570**	**68.570**
Inflow	**34.980**	**39.353**	**39.353**	**48.098**	**56.843**	**56.843**	**69.960**	**78.705**	**78.705**	**96.195**	**104.940**	**104.940**
Cumulative	2.770	7.143	7.143	9.828	12.513	12.513	19.570	22.255	22.255	33.685	36.370	36.370
	-57.541	-50.399	-43.256	-33.429	-20.916	-8.404	11.167	33.422	55.677	89.362	125.732	162.102

MONTHLY REVENUE GENERATION

REVENUE GENERATION	July 12	Aug 12	Sept 12	Oct 12	Nov 12	Dec 12	Jan 13	Feb 13	Mar 13	Apr 13	May 13	June 13
Revenue(1st instalment)		0	0	0	0	0	0	8.745	8.745	8.745	13.118	13.118
revenue (2nd instalment)										8.745	8.745	8.745
final installment												
total revenue								**8.745**	**8.745**	**17.490**	**21.863**	**21.863**

REVENUE GENERATION	July 13	Aug 13	Sept 13	Oct 13	Nov 13	Dec 13	Jan 14	Feb 14	Mar 14	Apr 14	May 14	June 14
Revenue(1st instalment)	13.118	17.490	17.490	17.490	26.235	26.235	26.235	34.980	34.980	34.980	43.725	43.725
revenue (2nd instalment)	13.118	13.118	13.118	17.490	17.490	17.490	26.235	26.235	26.235	34.980	34.980	34.980
final installment	8.745	8.745	8.745	13.118	13.118	13.118	17.490	17.490	17.490	26.235	26.235	26.235
total revenue	**34.980**	**39.353**	**39.353**	**48.098**	**56.843**	**56.843**	**69.960**	**78.705**	**78.705**	**96.195**	**104.940**	**104.940**

MONTHLY STAFF COST

Staff cost	July 13	Aug 13	Sept 13	Oct 13	Nov 13	Dec 13	Jan 14	Feb 14	Mar 14	Apr 14	May 14	June 14
Sales	9.000	9.000	9.000	13.000	13.000	13.000	17.000	17.000	17.000	21.000	21.000	21.000
TM	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000
total(TM+sales)	14.000	14.000	14.000	18.000	18.000	18.000	22.000	22.000	22.000	26.000	26.000	26.000
REMS	4.000	8.000	8.000	8.000	12.000	12.000	12.000	16.000	16.000	16.000	20.000	20.000

Staff cost	July 12	Aug 12	Sept 12	Oct 12	Nov 12	Dec 12	Jan 13	Feb 13	Mar 13	Apr 13	May 13	June 13
Sales	0	0	0	0	0	0	5.000	5.000	5.000	5.000	5.000	5.000
TM	0	0	0	0	0	0	5.000	5.000	5.000	5.000	5.000	5.000
total(TM+sales)	0	0	0	0	0	0	10.000	10.000	10.000	10.000	10.000	10.000
REMS	0	0	0	0	0	0	0	0	0	4.000	4.000	4.000